


CATALOGUE OF BROWN UNIVERSITY

1920-1921



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THE CATALOGUE
OF
BROWN UNIVERSITY

ONE HUNDRED AND FIFTY-SEVENTH YEAR

1920-1921



PROVIDENCE, RHODE ISLAND
PUBLISHED BY THE UNIVERSITY

1920

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CALENDAR 1920-1921

Vacations and Holidays occurring within the Academic Year 1920-21 are indicated by dark type.

1920	1921	1921
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THE UNIVERSITY CALENDAR 1920-1921

1920

- SEPTEMBER 1. *Wednesday.* Annual Meeting of the Corporation (first Wednesday in September).
- SEPTEMBER 14-20. *Tuesday to Monday, inclusive.* Examinations for admission to the Freshman class and to advanced standing.
- SEPTEMBER 20, 21. *Monday and Tuesday.* Registration of new students and enrolment of students previously in residence.
- SEPTEMBER 22. *Wednesday, 9 a.m.* ACADEMIC YEAR BEGINS (fourth Wednesday in September). Registration and enrolment of Graduate students at the Registrar's office.
- OCTOBER 6. *Wednesday.* Examination in Greek for the President's Premiums, 2 Sayles Hall, 2.30 p.m.
- OCTOBER 13. *Wednesday.* Examination in Latin for the President's Premiums, 1 Sayles Hall, 2.30 p.m.
- OCTOBER 20. *Wednesday.* Examination in Mathematics for the Hartshorn Premiums, 26 Wilson Hall, 2 p.m. Meeting of the Corporation.
- OCTOBER 27. *Wednesday.* Examination in French for the Hicks Premiums, 1 Sayles Hall, 2.30 p.m.
- NOVEMBER 3. *Wednesday.* Examination in German for the Caesar Misch Premiums, 5 Sayles Hall, 2.30 p.m.
- NOVEMBER 25. *Thursday.* Thanksgiving Day. No University exercises.
- DECEMBER 4. *Saturday.* Last day for receiving essays submitted in competition for the Gaston Prize Medal.
- DECEMBER 7. *Tuesday.* Preliminary discussion for the Class of 1880 Prizes.
- DECEMBER 9. *Thursday.* Last day for receiving essays submitted in competition for the Class of 1880 Prizes.

DECEMBER 14.	<i>Tuesday.</i> Public discussion for the Class of 1880 Prizes.
DECEMBER 22.	<i>Wednesday.</i> CHRISTMAS RECESS BEGINS.
1921	
JANUARY 4.	<i>Tuesday.</i> CHRISTMAS RECESS ENDS.
JANUARY 5.	<i>Wednesday,</i> 8 a.m. Recitations begin.
JANUARY 11.	<i>Tuesday.</i> Gaston Prize Medal Competition.
JANUARY 15.	<i>Saturday.</i> Last day for receiving applications for examinations to remove entrance conditions. Last day for receiving essays submitted in competition for the Bennett Prize.
JANUARY 21.	<i>Friday.</i> Last day for applications of competitors for the Carpenter Prizes in Elocution.
JAN. 26 to FEB. 4.	<i>Wednesday to Friday, inclusive.</i> Semester examinations.
FEBRUARY 1-7.	<i>Tuesday to Monday.</i> Mid-year examinations for admission to the Freshman class.
FEBRUARY 5-8.	<i>Saturday to Tuesday, inclusive.</i> MID-YEAR RECESS.
FEBRUARY 7, 8.	<i>Monday and Tuesday.</i> Enrolment of Undergraduate students and candidates for admission to the Freshman class.
FEBRUARY 9.	<i>Wednesday,</i> 8 a.m. SECOND SEMESTER BEGINS. Enrolment of Graduate students at the Registrar's office.
FEBRUARY 16.	<i>Wednesday.</i> Last day for applications of competitors for the Bishop McVickar Prizes.
MARCH 1.	<i>Tuesday.</i> Last day for applications of competitors for the Society of Colonial Dames Prize.
MARCH 24-30.	<i>Thursday to Wednesday, inclusive.</i> SPRING RECESS.
MARCH 31.	<i>Thursday,</i> 8 a.m. Recitations begin.
APRIL 1.	<i>Friday.</i> Last day for receiving applications for examination for the degree of Doctor of Philosophy.

- APRIL 15. *Friday.* Last day for receiving applications for the Grand Army of the Republic Fellowship. Last day for receiving theses of candidates for the degree of Doctor of Philosophy.
- APRIL 16. *Saturday.* Last day for receiving essays submitted in competition for the Bishop McVickar Prizes.
- APRIL 19. *Tuesday.* Carpenter Prize Speaking Competition.
- APRIL 30. *Saturday.* Last day for receiving essays submitted in competition for the Society of Colonial Dames Prize.
- MAY 4. *Wednesday.* Examination in Greek for the Foster Premium.
Meeting of the Board of Fellows.
- MAY 10. *Tuesday.* Hicks Prize Debate.
- MAY 18. *Wednesday.* Examination in Latin for the Lucius Lyon Premiums.
- MAY 28. *Saturday.* Last day for receiving essays submitted in competition for the Class of 1873 Prize.
- MAY 30. *Monday.* MEMORIAL DAY. No University exercises.
- MAY 31 to JUNE 9. *Tuesday to Thursday, inclusive.* Semester examinations.
- JUNE 1. *Wednesday.* Last day for examinations for the degree of Doctor of Philosophy.
- JUNE 12. *Sunday.* Baccalaureate Sermon, First Baptist Meeting House, 4.30 p.m.
- JUNE 13. *Monday.* Class Day.
- JUNE 14. *Tuesday.* Annual Meeting of the Phi Beta Kappa Society, Administration Building, 9.30 a.m.
Meeting of the Board of Fellows.
Annual Meeting of the Associated Alumni.
Ivy Day, Pembroke Hall.

- JUNE 15 *Wednesday.* ONE HUNDRED AND FIFTY-THIRD ANNUAL COMMENCEMENT (third Wednesday in June), First Baptist Meeting House, 10 a.m.
- JUNE 16. *Thursday.* Meeting of the Corporation.
- JUNE 16 to SEPT. 27. SUMMER VACATION.
- SEPTEMBER 7. *Wednesday.* Annual meeting of the Corporation (first Wednesday in September).
- SEPTEMBER 20-26. *Tuesday to Monday, inclusive.* Examinations for admission to the Freshman class and to advanced standing.
- SEPTEMBER 26, 27. *Monday and Tuesday.* Registration of new students and enrolment of students previously in residence.
- SEPTEMBER 28. *Wednesday, 9 a.m.* ACADEMIC YEAR BEGINS (fourth Wednesday in September).

THE CORPORATION

OFFICERS

WILLIAM HERBERT PERRY FAUNCE, D.D., LL.D., PRESIDENT

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CORNELIUS SOWLE SWEETLAND, A.M., TREASURER

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ON FILLING VACANCIES IN THE BOARD OF TRUSTEES

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MESSRS. GREEN and SHARPE.

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TO REPRESENT THE UNIVERSITY ON THE BOARD OF THE RHODE ISLAND SCHOOL OF DESIGN

The PRESIDENT, Professor GREENE.

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MESSRS. F. W. TILLINGHAST, J. P. BARSTOW, ALFRED K. POTTER, and R. F. CHAMBERS.

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 ANNIE CROSBY EMERY ALLINSON, PH.D., ACTING DEAN OF THE
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 EDWIN AYLSWORTH BURLINGAME, SC.B., COMPTROLLER

FACULTY

- | | |
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| COURTNEY LANGDON, A.B.
<i>Professor of the Romance Languages and Literatures</i> | 86 Upton Avenue |
| WILFRED HAROLD MUNRO, A.M., L.H.D.
<i>Professor of European History, Emeritus</i> | 115 Butler Avenue |

‡ On leave of absence during the academic year 1920-21.

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<i>Dean of the University ; Professor of Applied Mathematics</i>	
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FREDERICK TAFT GUILD, A.M.	9 Oriole Avenue
<i>Registrar, and Secretary of the Faculty</i>	
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WALTER GOODNOW EVERETT, PH.D.	550 Broad Street
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<i>Associate Professor of the Germanic Languages and Literatures</i>	
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‡JAMES QUAYLE DEALEY, PH.D.	872 Hope Street
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<i>Associate Professor of the Romance Languages</i>	
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ARTHUR EUGENE WATSON, PH.D.	30 Congdon Street
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‡ On leave of absence during the second semester 1920-21.

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- HERBERT EUGENE WALTER, PH.D. 67 Oriole Avenue
Associate Professor of Biology
- ROLAND GEORGE DWIGHT RICHARDSON, PH.D. 44 University Avenue
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- RAYMOND CLARE ARCHIBALD, PH.D. 9 Charles Field Street
Associate Professor of Pure Mathematics
- THEODORE COLLIER, PH.D. 38 Keene Street
Professor of European History
- WILLIAM THOMSON HASTINGS, A.M. 34 Benevolent Street
Assistant Professor of English

‡ On leave of absence during the second semester 1920-21.

§ On leave of absence during the academic year 1920-21.

OFFICERS OF ADMINISTRATION AND INSTRUCTION 17

JOHN CORLISS DUNNING, PH.D. <i>Assistant Professor of Political Science</i>	219 Benefit Street
STEPHEN SHELDON COLVIN, PH.D. <i>Professor of Educational Psychology; Director of the School of Education</i>	372 Lloyd Avenue
ALFRED HARRISON JONES, PH.D. <i>Associate Professor of Logic</i>	144 Congdon Street
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ROBERT FOSTER CHAMBERS, PH.D. <i>Assistant Professor of Chemistry on the Newport Rogers Foundation</i>	104 Irving Avenue
SAMUEL TOMLINSON ARNOLD, PH.D. <i>Assistant Professor of Chemistry</i>	24 Mayflower Street
THEODORE HENRY BROWN, PH.D. <i>Assistant Professor of Business Administration</i>	79 Taber Avenue
HAROLD STEPHEN BUCKLIN, PH.D. - <i>Assistant Professor of Social Science</i>	11 Arch Street
HERBERT FRANKLIN DAVISON, A.M. <i>Assistant Professor of Chemistry</i>	41 Sumner Street, Pawtucket
SYDNEY WILMOT, Sc.B., A.M. <i>Assistant Professor of Applied Mechanics</i>	63 Elmgrove Avenue
†JOHN SHAPLEY, PH.D. <i>Assistant Professor of Art</i>	214 Huntington Avenue, Boston, Mass.
RICHARD MONTGOMERY FIELD, PH.D. <i>Assistant Professor of Geology</i>	16 Alveston Street, Jamaica Plain, Mass.
ROBERT WILBUR BURGESS, PH.D. <i>Assistant Professor of Mathematics</i>	65 Charles Field Street
RAY EDWIN GILMAN, PH.D. <i>Assistant Professor of Mathematics</i>	654 Hope Street
FLOYD LAMAR VAUGHAN, A.M. <i>Assistant Professor of Economics</i>	120 Waterman Street

† On leave of absence during the first semester 1920-21.

EDOUARD R. MASSEY, B. ÈS LETTRES <i>Assistant Professor of the Romance Languages</i>	203 University Avenue
CARROLL WILLIAM DODGE, PH.D. <i>Assistant Professor of Botany</i>	238 Gano Street
WALTER HENRY SNELL, PH.D. <i>Assistant Professor of Botany</i>	19 Nisbet Street
VERNER WINSLOW CRANE, PH.D. <i>Assistant Professor of American History on the George L. Littlefield Foundation</i>	210 Waterman Street
FRANCIS KEESE WYNKOOP DRURY, A.M., B.L.S. <i>Assistant Librarian; Assistant Professor of Library Science</i>	184 Waterman Street
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FREDERICK NEALE TOMPKINS, Sc.B. <i>Instructor in Electrical Engineering</i>	35 White Street, Pawtucket
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RAYMOND ABNER PRESTON, A.M. <i>Instructor in English</i>	22 University Hall
WILLIAM RODERICK SHERMAN, A.M. <i>Instructor in Economics</i>	7 Congdon Street
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ALTON CHARLES CHICK, Sc.B. <i>Instructor in Mechanical Engineering</i>	65 Prospect Street
EUGENE WILLIAM O'BRIEN, Sc.B. <i>Instructor in Engineering</i>	279 Benefit Street
RAYMOND FRANKLIN BORDEN, PH.D. <i>Instructor in Mathematics</i>	84 Tenth Street
EVERETT CLAIR BANCROFT, A.B. <i>Instructor in Economics</i>	197 Waterman Street
LESLIE EARL SWAIN, A.M. <i>Instructor in Physical Training</i>	36 Ralph Street
ALBERT BULLOCK COOP, Sc.B. <i>Instructor in Engineering</i>	556 Hope Street
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OFFICERS OF ADMINISTRATION AND INSTRUCTION 19

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MARCUS LEON SHERIN, B.S.	55 Waterman Street
<i>Instructor in Physics</i>	
LUCIUS AURELIUS BIGELOW, Ph.D.	399 Wayland Avenue
<i>Instructor in Chemistry</i>	
BENJAMIN CROCKER CLOUGH, A.M.	144 Benefit Street
<i>Instructor in English</i>	
REGINALD GORDON HARRIS, A.M.	Brown University
<i>Instructor in Biology</i>	

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<i>Instructor in Biology in the Women's College</i>	
NELLIE EILEEN BUSSELL, A.B.	118 Cushing Street
<i>Director of Hygiene and Physical Education in the Women's College</i>	

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GENE WILDER WARE, A.B.	72 Charles Field Street
<i>Lecturer in Music; Organist and Director of Chapel Music</i>	
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<i>Demonstrator in Botany</i>	

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GEORGE FRANKLIN HERRICK <i>Assistant in Physical Training</i>	Brown University
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CAROLINE MILLARD MORTON <i>Assistant in English</i>	131 Superior Street

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OFFICERS OF ADMINISTRATION AND INSTRUCTION 21

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<i>Assistant Superintendent of Grounds and Buildings</i>	
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<i>Librarian; Professor of Bibliography</i>	
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<i>Assistant Librarian; Assistant Professor of Library Science</i>	
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<i>Reference Librarian</i>	
GRACE THOMAS GRISWOLD	196 Blackstone Boulevard
<i>Loan Desk Assistant</i>	
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<i>Cataloguer</i>	
EDITH MARIE LINNÉA CARLBORG, A.M.	124 Atlantic Avenue
<i>Special Cataloguer in History</i>	
MABEL EDITH SUNDERLAND	Old Barrington Road, East Providence
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MADGE COLBY TOOKER, A.B.	53 Waterman Street
<i>Assistant Cataloguer</i>	
ELIZABETH CLARK SPICER	371 Broadway
<i>Copyist</i>	
ALICE ADAMS	34 Hawthorne Avenue, Eden Park
<i>Copyist</i>	
DOROTHY FOSTER MOSHER, A.B.	256 Benefit Street
<i>Keeper of Department Libraries</i>	
HOPE PEIRCE LITCHFIELD	30 Beckwith Street, Auburn
<i>Order Clerk</i>	
SARAH IDE SHEPARD, A.B.	2585 Pawtucket Avenue, East Providence
<i>Serial Clerk</i>	

STANDING COMMITTEES OF THE FACULTY

REGISTRATION AND ATTENDANCE

Dean RANDALL, Professors DELABARRE, HILL, JOHNSON, HUNTINGTON, HUNKINS, and SMITH, Dean ALLINSON, Mr. GUILD.

EDUCATIONAL ADVICE AND DIRECTION

Professors COLVIN, HILL, GREENE, FOWLER, HUNTINGTON, C. W. BROWN, WALTER, JONES, SMITH, CURRIER, and ARNOLD.

CURRICULUM

Professors GARDNER, RANDALL, EVERETT, MEAD, DAMON, COLVIN, and RICHARDSON.

STUDENT ORGANIZATIONS

Professors DELABARRE, HILL, POTTER, MARVEL, ARNOLD, and SNELL.

SCHEDULES

Mr. GUILD, Professors GORHAM, T. H. BROWN, and BURGESS.

UNIVERSITY EXTENSION

Professors JACOBS, CROWELL, KENERSON, WALTER, JONES, and VAUGHAN.

PRIZES AND ACADEMIC HONORS

Professors HASTINGS, P. H. MITCHELL, and BUCKLIN.

LIBRARY

Professors MEAD, COLLIER, and SMITH.

DEGREES OUT OF COURSE

Professors HARKNESS, RANDALL, BRONSON, DEALEY, and GREENE.

CONSULTATION BETWEEN THE CORPORATION AND THE FACULTY

The President, Messrs. A. B. CHACE, T. F. GREEN, W. R. DORMAN, Professors GARDNER, DEALEY, and MEAD.

HISTORY OF BROWN UNIVERSITY

BROWN UNIVERSITY, first called Rhode Island College, was founded in 1764. The project originated among the leaders in the Philadelphia Baptist Association, who chose the colony of Rhode Island as the most suitable place, and in 1763 sent James Manning, a recent graduate of New Jersey College, to confer with prominent men in Newport. Conditions in the colony were ripe for the establishment of an institution of learning on broad lines. The spirit of religious liberty still prevailed in the commonwealth founded by Roger Williams; commerce on land and sea was a growing source of wealth; and a considerable degree of culture existed, especially in Newport, then a thriving seaport and the home of many men of wide intellectual interests. Some of the leading citizens, including Ezra Stiles, later president of Yale College, had been considering plans for a college a year or two before Manning's visit, and the proposal from Philadelphia won quick and hearty support. A charter, drafted by Mr. Stiles and William Ellery (a signer of the Declaration of Independence), but considerably changed by other hands, was granted by the legislature in 1764. It provided that twenty-two of the thirty-six trustees should be Baptists, five Quakers, four Congregationalists, and five Episcopalians; that eight of the twelve fellows, including the president, should be Baptists, and the rest of any denominations; and that the members of the Faculty might be of any Protestant faith. Especially noteworthy are the following provisions: "Into this Liberal & Catholic Institution shall never be admitted any Religious Tests but on the Contrary all the Members hereof shall for ever enjoy full free Absolute and uninterrupted Liberty of Conscience"; and "the Sectarian differences of opinions, shall not make any Part of the Public and Classical Instruction."

The first meeting of the Corporation was held at Newport, in September, 1764, when Governor Stephen Hopkins, a Quaker, was chosen chancellor. A year later James Manning was appointed "President of the College, Professor of Languages and other Branches of Learning with full Power to act in those Capacities at Warren or elsewhere." The first student had been matriculated the day before; for nearly a year he was the only student. David Howell, a graduate of

New Jersey College, was engaged as tutor in 1766, and in 1769 was made professor of natural philosophy. At the first Commencement, in 1769, a class of seven graduated. In 1770 the College moved to Providence, a growing town of four thousand inhabitants, which had subscribed about \$15,000 for an endowment; some \$6000 had also been collected in Great Britain and among the Baptists of the Southern States. A site of eight acres on College Hill was bought for \$730; and University Hall, modelled on Nassau Hall at Princeton, and a house for the president were built in 1770-71. In 1775 the Baptist church, of which Manning had become pastor, erected a new meeting-house, "for the publick Worship of Almighty GOD; and also for holding Commencement in." From December, 1776, to May, 1782, the college building was used as barracks and hospital by American and French troops, and college exercises were suspended. Twenty-three of the sixty-seven graduates rendered active service on the patriot side during the Revolution. After the war the College began slowly to grow again. The students, who had numbered about forty in 1776, increased to seventy-two by 1789, and in 1790 a class of twenty-two graduated. Most of the instruction was given by the president and two or three tutors; but professorships without stipend were established in natural philosophy, natural history, mathematics and astronomy, and law. The library had two thousand volumes.

President Manning died in 1791. The success of the College during its first quarter-century was due largely to his ability as organizer, teacher, and orator. His discipline was paternal but strict. Students were visited daily in their rooms by the tutors, and most of them boarded in the college commons; all were required to attend chapel twice a day. The course of study, like the regimen, was based upon that at the College of New Jersey. The requirements for admission were a knowledge of Cicero, Virgil, the Greek Testament, and arithmetic, and ability to write "true Latin." In college the chief studies were Latin, Greek, mathematics, logic, philosophy, history, and oratory; most of these were not carried far, but the instruction in oratory was prolonged and thorough. Of the 165 graduates under Manning, 43 became ministers (26 Congregationalists, 12 Baptists), 29 lawyers, 19 physicians, and 48 entered public life.

Jonathan Maxcy, of the class of 1787, was the second president, and served until 1802, when he resigned to become president of Union College. He was a brilliant teacher and orator, but did not excel as an administrator. There was little growth in the endowment under

him, and no essential change in the course of study. The students increased to somewhat over one hundred. Of the 227 graduates, 66 became lawyers, 56 clergymen (34 Congregationalists, 11 Baptists), 36 teachers or professors, 17 judges, and 13 Congressmen. The most distinguished name is that of Henry Wheaton, of the class of 1802, minister to Prussia and authority on international law.

Asa Messer, of the class of 1790, who had been a member of the Faculty for eleven years, succeeded to the presidency. The name of the institution was changed to Brown University in 1804, in recognition of Nicholas Brown's gift of \$5000 to endow a chair of oratory and belles-lettres. A Medical School was established in 1811: local physicians gave short courses of lectures, which the candidates for a medical degree were required to attend for two years, besides studying three years with a reputable practitioner. The school lasted until 1828, and graduated eighty-seven men, several of whom attained eminence in their profession. By 1822 the students in the academic course had increased to one hundred and fifty-two; an additional dormitory was needed, and Hope College, named for Mr. Brown's sister, was therefore built by him in 1823. In 1825 the graduating class numbered forty-eight. Tuition, which had been \$12 under Manning and \$16 under Maxcy, was raised to \$20 in 1822; but the productive funds were only \$15,578 in 1824. The Faculty in 1825 consisted of the president, nine professors (four of whom were merely lecturers in the Medical School), and two tutors. The college library contained about five thousand volumes in 1826, when a catalogue was published; and the libraries of the Philermenian Society and the United Brothers, two student debating societies, comprised nearly three thousand more. The institution was still emphatically a poor man's college. The long vacation was placed in the winter, that students might teach school, and in the catalogue of 1825-26 is the statement, "Tuition, Library, Room Rent, and Board, less than \$100 per annum." The graduates in the regular course under President Messer numbered six hundred and ninety-three, nearly twice as many as under Manning and Maxcy. The most notable names among many distinguished in professional and public life are Horace Mann, who remodelled public-school education in America, Adoniram Judson, missionary to Burma, Samuel G. Howe, the teacher of Laura Bridgman, and William L. Marcy, Secretary of State.

President Messer's later years were disturbed by serious disorders among the students and by opposition to his theological views, and

he resigned in 1826. His successor was Francis Wayland, a graduate of Union College, where he taught for several years, and a prominent Baptist clergyman. His powerful personality soon raised the University to a higher level. He tightened the reins of government, and quickened the intellectual life. The Medical School was discontinued, in order that all the resources might be concentrated upon the academic course. Entrance requirements were somewhat raised. The curriculum was much enriched, especially in the classics, mathematics, and natural sciences, and political economy was added. In several departments lectures supplemented the text-book. Prizes for excellence in examinations and for essays were established. A fund of \$25,000 for the library was secured. The general endowment in 1841 was only \$32,300; but tuition, which was now \$36, brought in a considerable income. Manning Hall was built by Mr. Brown in 1835 as a chapel and library. Rhode Island Hall was erected in 1840 for the use of the departments of natural science, chiefly with funds subscribed by citizens of the state; and in the same year Mr. Brown built a new house for the president. At his death, in 1841, Mr. Brown left bequests which swelled his total gifts to the University to nearly \$160,000. A chapter of the Phi Beta Kappa Society was established in 1830, and the first Greek-letter fraternity for undergraduates in 1836. An Alumni Association was organized in 1842. *The Brunonian*, an undergraduate magazine, was published during 1829-31.

President Wayland's study of English universities, in 1840, had made him dissatisfied with American collegiate methods; the steady decline in numbers for several years (from 196 in 1836 to 152 in 1849) confirmed his belief that something was radically wrong; and in 1850 he launched his so-called New System, which had been in part anticipated at Harvard University and the University of Virginia. The plan comprised three main features: 1. An elective system, by which "every student might study what he chose, all that he chose, and nothing but what he chose"; 2. The development of courses in applied science, as an aid to agriculture and manufactures; 3. A new system of degrees, the degree of Master of Arts to be granted after four years of study, that of Bachelor of Arts after three years, and a new degree, Bachelor of Philosophy, to be given at the completion of a three-year course in scientific and English studies, with very low requirements for admission. A fund of \$125,000 was raised to put the New System into effect. The results were disappointing. Only a narrow range of electives was possible, for the total

number of courses was still small; the courses in applied science were limited to chemistry and civil engineering, and even for these there was not much demand; and the new system of degrees did not bring great increase in the number of students, while the quality was poorer. Yet the New System, in its best features, showed remarkable prevision of the direction that university education was soon to take.

President Wayland resigned in 1855, because of failing health. His successor was Barnas Sears, of the class of 1825, a very scholarly man, who had been president of Newton Theological Institution and secretary of the Massachusetts Board of Education. He restored the degrees of Master of Arts and Bachelor of Arts to their former footing, but retained the course for the degree of Bachelor of Philosophy and the courses in applied science. In spite of the Civil War the endowment increased from \$203,000 to \$327,000, and thirty-six scholarships of \$1000 each were founded; in 1863 the Chemical Laboratory was built. Tuition was raised to \$50 in 1864. Class Day was instituted in 1856; football, baseball, and boating developed; and at the outbreak of the Civil War a military company was formed. Of two hundred and seventy-eight men graduating during the war, one hundred and thirty-two enlisted in the army. Notable names among the graduates during this administration are those of two Secretaries of State, Richard Olney and John Hay. President Sears resigned in 1867, to become agent of the Peabody Fund for education in the South.

Alexis Caswell, of the class of 1822, who had resigned his professorship in 1864, was recalled as president in 1868, Professor George Ide Chace having served as president *ad interim* since the retirement of President Sears. During President Caswell's short term of office the productive funds were increased to \$602,000, and the chairs of physics and chemistry were endowed. In spite of an advance in tuition to \$75, the number of students somewhat increased, and the athletic and social side of undergraduate life received more and more emphasis. The Alumni Association was resuscitated in 1868, and local associations were formed in New York, Philadelphia, and Boston during the next two years. In 1870 the time of Commencement, which had always been in September except for two years under President Wayland, was changed to June.

President Caswell retired in 1872, and was succeeded by Ezekiel G. Robinson, of the class of 1838, president of Rochester Theological Seminary. During his administration the University made great

progress. Rhode Island Hall was enlarged in 1874, to accommodate the growing departments of natural science. The library, which had long outgrown its quarters in Manning Hall, was housed in a beautiful new building erected in 1878 with a bequest of John Carter Brown. Slater Hall, a dormitory, was built in 1879 by Horatio N. Slater. Sayles Hall, given by William F. Sayles in memory of his son, and containing class-rooms and a large auditorium, was completed in 1881. In 1883 University Hall was renovated. A physics laboratory, named Wilson Hall in honor of George F. Wilson, who left a bequest for it, was begun in 1889. Funds for the Lyman Gymnasium were given by Daniel W. Lyman in 1887, and for the Ladd Observatory by Herbert W. Ladd in 1889. The chair of natural history and botany was endowed by a bequest of Stephen T. Olney in 1878, and in 1884 the Metcalf Botanical Garden was given to the University by the widow of Whiting Metcalf. The productive funds were increased to \$1,000,000. The requirements for admission were made more severe; and the curriculum was much enlarged, especially in modern languages and natural science. In 1876 the course for the degree of Bachelor of Philosophy was lengthened to four years. The most radical change was a liberal though guarded extension of the elective system in 1885. Graduate study was thereby encouraged; the degree of Master of Arts was granted upon examination in 1888, that of Doctor of Philosophy in the following year. The number of undergraduates, however, remained nearly the same, seldom rising above two hundred and fifty.

Elisha Benjamin Andrews, of the class of 1870, who had been president of Denison University and professor in Newton Theological Institution, Brown University, and Cornell University, succeeded President Robinson in 1889. During his administration the University grew at a remarkable rate. The students increased to about nine hundred, of whom more than one hundred were candidates for advanced degrees. Several new departments were added, and the Faculty more than trebled. The courses in engineering received greater emphasis, and the degrees of Civil Engineer, Mechanical Engineer, and Bachelor of Science were established. In 1891 the Corporation voted to admit women to the college examinations; in 1892 women were recognized as candidates for degrees, and women graduate students were admitted to the University classes. In 1897 the Corporation created "a department of the University to be known as the Women's College in Brown University"; and in the same year the Rhode Island

Society for the Collegiate Education of Women built Pembroke Hall and gave it to the University as a recitation hall for the Women's College, where women undergraduates might receive instruction in separate classes taught by members of the University Faculty, although taking the University examinations and receiving their degrees from the University. Wilson Hall, Ladd Observatory, and Lyman Gymnasium were completed in 1891, and Hope College was renovated. Maxcy Hall, a dormitory with a few class-rooms, was built in 1895. A new athletic field, named in honor of President Andrews, was laid out in 1898-99. In 1898 the productive funds were \$1,125,685; the estimated value of the grounds and buildings was \$1,177,966. In this year President Andrews resigned, to become superintendent of the Chicago public schools.

William Herbert Perry Faunce, of the class of 1880, was elected president in 1899, Professor Benjamin F. Clarke having served as president *ad interim* for the preceding academic year. The material resources of the University have been greatly enlarged during the present administration. The general endowment has increased to \$5,824,823. Salaries have been raised, and a pension system similar to that of the Carnegie Foundation went into effect in 1913. Many new buildings have been erected: a house for the president, in 1901; an Administration Building, the gift of Augustus Van Wickle, in 1902; an Engineering Building, in 1903; Caswell Hall, a dormitory, in 1904; Rockefeller Hall, named for the donor, John D. Rockefeller, and occupied by the Christian Association and the Brown Union, in 1904; the John Carter Brown Library, given by the trustees of the estate of John Nicholas Brown, in 1904; the Carrie Tower, built by Paul Bajnotti in memory of his wife, Carrie Mathilde Brown Bajnotti, in 1904; a marble swimming pool, given by Colgate Hoyt, in 1904; a field house on Andrews Field, erected by Edgar L. Marston, in 1907; and the John Hay Library, the gift of Andrew Carnegie and others, in 1910. The Arnold Biological Laboratory, named for the donor, Dr. Oliver H. Arnold, was completed in 1915. In 1903 a great organ, presented by Lucian Sharpe, was set up in Sayles Hall. Bronze statues of Caesar Augustus and Marcus Aurelius, the gifts of Moses B. I. Goddard, were placed on the campus in 1906 and 1908. An iron fence around the grounds was completed in 1905; and gates have been erected at various times—the Van Wickle Gates, in 1901; the John Nicholas Brown Gate, given by Mrs. Brown, in 1904; the Goddard Gates, in memory of Chancellor William Goddard, the gift of his

daughter, Mrs. C. Oliver Iselin, in 1910; and the gates at minor entrances, presented by the classes of 1872, 1884, and 1887. The Slater Memorial Homestead was given to the Women's College by Mrs. Horatio N. Slater, for a dormitory, in 1900. Sayles Gymnasium, for the women students, was built by Frank A. Sayles in 1906, in memory of his sister. Miller Hall, a women's dormitory named for Dr. and Mrs. Horace G. Miller, was erected in 1910.

The Faculty has increased to more than a hundred members, and the number of students to over eleven hundred. Entrance requirements for the engineering degrees and the degree of Bachelor of Philosophy have been raised, and those for the degree of Bachelor of Arts have been broadened. The curriculum has been widened and deepened, while the elective system has been guarded against abuse by regulations securing a certain breadth of study. Graduate study has been fostered by the development of laboratories and seminaries. The work of the Faculty has been better organized by the appointment of deans and by reorganization of the committee system. Undergraduate life is more carefully supervised, partly through agencies that give training in self-government. The University has been brought into closer relations with the community, the alumni, and other educational institutions, by the establishment of the Brown University Teachers' Association and the School of Education, the appointment of visiting committees, the formation of new alumni associations, and the giving of more power to the alumni in the choice of trustees.

The general effect of the policy of the last three administrations has been to make the institution a "university college," as it has been called, combining many of the advantages of the small college and the large university.

At the close of the one hundred and fifty-second Commencement of the University, in 1920, there were enrolled the names of 8919 graduates—7893 men and 1026 women. Of this number, 7890 had received the academic first degree; 249, exclusive of the foregoing, had received advanced degrees; 69, not previously reckoned, had received the degree of Doctor of Medicine; 711 others had received honorary degrees. Of the entire number, 5328, or 60 per cent., were living.

ADMISSION TO THE UNIVERSITY

ENTRANCE REQUIREMENTS FOR THE VARIOUS DEGREES†

For Students who entered in 1919 or thereafter

FOR THE DEGREE OF BACHELOR OF ARTS. Candidates must present fourteen and one-half units as follows: three in English; one and one-half in Algebra; one in Plane Geometry; one in History; the elementary and advanced requirement in either Latin or Greek; and elective units totalling four if Latin is presented, or five if Greek is presented.

FOR THE DEGREE OF BACHELOR OF PHILOSOPHY. Candidates must present fourteen and one-half units as follows: three in English; one and one-half in Algebra; one in Plane Geometry; one in History; three in languages other than English, and five in elective subjects.

FOR THE DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING. Candidates must present fourteen units as follows: three in English; one and one-half in Algebra; one in Plane Geometry; one-half in Solid Geometry; one in History; four from the following subjects: Chemistry, Physics, Languages other than English; and three in elective subjects.

ENTRANCE UNITS. A unit in any subject represents a year's study, constituting approximately a quarter of a full year's work in a secondary school.

This statement is designed to afford a standard of measurement for the work done in secondary schools. It takes the four-year high school course as a basis, and assumes that the length of the school year is from thirty-six to forty weeks, that a period is from forty to sixty minutes in length, and that the study is pursued for four or five periods a week; but under ordinary circumstances, a satisfactory year's work in any subject cannot be accomplished in less than one hundred and twenty sixty-minute periods or their equivalent. Schools organized on any other than a four-year basis can, nevertheless, estimate their work in terms of this unit.

LISTED SUBJECTS

	<i>Units</i>		<i>Units</i>
English 1 (Grammar and Composition)	1½	Two-year Latin	2
English 2 (Literature)	1½	Elementary Latin	3
Ancient History	1	Advanced Latin	1
Medieval and Modern European History	1	Elementary Greek	2
English History	1	Advanced Greek	1
American History and Civil Government	1	Elementary French (First year)	1
		Elementary French (Second year)	1
		Intermediate French	1

† For requirements for the degree of Bachelor of Education, see page 73.

	<i>Units</i>		<i>Units</i>
Elementary German (First year)	1	Advanced Algebra	$\frac{1}{2}$
Elementary German (Second year)	1	Plane Geometry	1
Intermediate German	1	Solid Geometry	$\frac{1}{2}$
Elementary Spanish (First year)	1	Plane Trigonometry	$\frac{1}{2}$
Elementary Spanish (Second year)	1	Physics	1
Intermediate Spanish	1	Chemistry	1
Elementary Italian (First year)	1	Botany	1
Elementary Italian (Second year)	1	Physiography	1
Intermediate Italian	1	Astronomy	1
Elementary Algebra 1	1	Biology	1
Elementary Algebra 2	$\frac{1}{2}$		

UNLISTED SUBJECTS. With the approval of the Committee on Registration and Attendance, subjects not on the regular list, but included in the curriculum of an approved school, may be presented by certificate; provided: (1) that the candidate is a graduate of the school on a four-year course; (2) that the grade for certification is the same as for the listed subjects.

ADMISSION AT MID-YEAR

Mid-winter graduates of high schools and academies who desire to apply for admission to the courses leading to the degrees of Bachelor of Arts and Bachelor of Philosophy will be admitted at the beginning of the second semester. Candidates for the degree of Bachelor of Science are admitted only in September. For detailed statements regarding requirements for admission, entrance examinations, registration and enrolment, and payment of bills, see pages 32-53, 54, 55, 168, 169.

METHODS OF ADMISSION TO THE FRESHMAN CLASS

ENTRANCE EXAMINATIONS CONDUCTED BY THE UNIVERSITY. Examinations for admission to the Freshman class are given by the University in September and at mid-year. Candidates desiring to be examined in June must take the examinations conducted by the College Entrance Examination Board; see page 34. A candidate may, at his option, take all his examinations in June or in September, or he may take part in June and part in September. The mid-year examinations cannot be taken as preliminaries.

Before taking any examination conducted by the University, a candidate must make written application to the Registrar, on a blank provided for the purpose, and secure a card admitting him to the examination. This may be done by correspondence, provided that the application is received not less than one week before the date of the first examination. A letter of recommendation from the principal of the preparatory school must be filed with the application.

Any of the September examinations may be taken one year before the candidate expects to enter college.

No credit beyond admission is given for certificates from preparatory schools or the New York Board of Regents, or for entrance examinations conducted by the College Entrance Examination Board or the University. If a candidate offers subjects in excess of those required for admission and desires to obtain credit for them as college subjects, he may apply to the Committee on Registration and Attendance for information regarding special examinations for advanced standing. Such examinations are not given in all preparatory subjects.

Examinations for advanced standing should be taken during the regular examination period in September. No student will be allowed to take such examinations after the beginning of the second year.

The mid-year entrance examinations will be held in Rhode Island Hall, Room 1; the September examinations will be held in Sayles Hall.

The order of the examinations in 1921 will be as follows:

FEBRUARY 1, 1921, and SEPTEMBER 20, 1921

Elementary Algebra 1, 8 a.m. to 10 a.m.; *Elementary Algebra 2*, 8 a.m. to 10 a.m.; *Plane Geometry*, 10.30 a.m. to 12.30 p.m.; *Two-year Latin*, 1.30 p.m. to 3.30 p.m.; *Elementary Latin*, 1.30 p.m. to 3.30 p.m.; *Advanced Latin*, 4 p.m. to 5.30 p.m.

FEBRUARY 2, 1921, and SEPTEMBER 21, 1921

English 1, 8 a.m. to 10 a.m.; *English 2*, 10.15 a.m. to 12.15 p.m.; *English, Comprehensive*, 8 a.m. to 11 a.m.; *Chemistry*, 1 p.m. to 3 p.m.; *Ancient History*, 3.30 p.m. to 5.30 p.m.

FEBRUARY 3, 1921, and SEPTEMBER 22, 1921

Elementary German (First year), 8 a.m. to 10 a.m.; *Elementary German (Second year)*, 10.15 a.m. to 12.15 p.m.; *Intermediate German*, 1 p.m. to 3 p.m.; *American History*, 3.15 p.m. to 5.15 p.m.; *Physiography*, 5.30 p.m. to 7.30 p.m.

FEBRUARY 4, 1921, and SEPTEMBER 23, 1921

Elementary French (First year), 8 a.m. to 10 a.m.; *Elementary French (Second year)*, 10.15 a.m. to 12.15 p.m.; *Intermediate French*, 1 p.m. to 3 p.m.; *Astronomy*, 3.15 p.m. to 5.15 p.m.; *Elementary Italian (First year)*, 3.15 p.m. to 5.15 p.m.; *English History*, 5.30 p.m. to 7.30 p.m.

FEBRUARY 5, 1921, and SEPTEMBER 24, 1921

Plane Trigonometry, 8 a.m. to 10 a.m.; *Solid Geometry*, 10 a.m. to 12 m.; *Advanced Algebra*, 1 p.m. to 3 p.m.; *Elementary Italian (Second year)*, 3.15 p.m. to 5.15 p.m.; *Physics*, 3.15 p.m. to 5.15 p.m.; *Botany*, 5.30 p.m. to 7.30 p.m.; *Intermediate Italian*, 5.30 p.m. to 7.30 p.m.

FEBRUARY 7, 1921, and SEPTEMBER 26, 1921

Elementary Greek, 8 a.m. to 10 a.m.; *Elementary Spanish (First year)*, 8 a.m. to 10.15 a.m.; *Advanced Greek*, 10.15 a.m. to 11.45 a.m.; *Elementary Span-*

ish (*Second year*), 10 a.m. to 12 m.; *Medieval and Modern History*, 1 p.m. to 3 p.m.; *Intermediate Spanish*, 3.30 p.m. to 5.30 p.m.

ENTRANCE EXAMINATIONS CONDUCTED BY THE COLLEGE ENTRANCE EXAMINATION BOARD. Examinations conducted by the College Entrance Examination Board are accepted in place of the corresponding examinations conducted by Brown University, provided they are passed with a grade of at least 60 per cent. In 1921 these examinations will be held June 20-25.

All applications for examination must be sent to the College Entrance Examination Board, 431 West 117th Street, New York, N. Y. Forms may be obtained from the Secretary of the Board upon request by mail. Applications for examination at points in the United States east of the Mississippi River, or on the Mississippi River, must be received by the Secretary on or before May 30, 1921; applications for examination elsewhere in the United States or in Canada must be received on or before May 23, 1921; and applications for examinations at points outside the United States or Canada must be received on or before May 9, 1921. When the candidate has failed to obtain the required blank form of application for examination, the usual examination fee will be accepted if the fee arrive not later than the specified date accompanied by a memorandum containing the name and address of the candidate, the examination centre at which he wishes to present himself, and a list of all the subjects in which he desires to take the examinations.

The examination fee is \$6 for candidates examined in the United States and Canada, and \$20 for candidates examined outside of the United States and Canada. The fee, which must be sent with the application, should be remitted by postal order, express order, or draft on New York, to the order of the College Entrance Examination Board.

Applications received later than the dates named will be accepted when it is possible to arrange for the admission of the candidates concerned, but only upon the payment of \$6 in addition to the regular fee.

A list of the places at which examinations are to be held by the Board in June, 1921, will be published about March 1. Requests that the examinations be held at particular points, to receive proper consideration, should be transmitted to the Secretary of the Board not later than February 1.

ADMISSION BY CERTIFICATE. In place of examinations, certificates are accepted from any school which has the privilege of issuing certificates to Brown University. Certificates are accepted for admission to the Freshman class only, not for admission to advanced standing.

Principals of schools in New England who desire the certificate privilege for Brown University, or for any other college which is a member of the New England College Entrance Certificate Board, should address the Secretary of the Board, Dean Frank W. Nicolson, Wesleyan University, Middletown, Conn.,

who will furnish the necessary application blanks. These blanks must be returned to him before April 1 of the year for which the certificate privilege is desired.

Principals of schools situated outside of New England who desire the certificate privilege should make application to the Registrar of the University before May 1, if possible, and should furnish full and detailed information regarding the courses of study, teachers, pupils, library, laboratories, apparatus, etc. Blank forms for this purpose will be supplied on request. If this statement is satisfactory, the school will be placed on the accredited list for a period of from one to three years. At the expiration of this period, or whenever the principal of the school is changed or a change in policy is instituted, a new application for the certificate privilege should be made.

Certificates from the New York Board of Regents are accepted for the specified subjects so far as they coincide with the entrance requirements of Brown University.

Blank forms for the certification of candidates may be obtained from the Registrar by the principals of schools having the privilege of certification. These forms should be filled out and returned to him by July 1 for students intending to enter in September, or before January 15 for students intending to enter at mid-year. When a student has attended more than one school, a letter of recommendation from the principal of the school last attended must accompany the certificate.

ENTRANCE REQUIREMENTS IN THE SEVERAL SUBJECTS‡

ENGLISH. *Three units.* Preparation in English has two main objects, of equal importance: (1) command of correct and clear English, spoken and written; (2) ability to read with accuracy, intelligence, and appreciation.

GRAMMAR AND COMPOSITION. The first object requires instruction in grammar and composition. English grammar should ordinarily be reviewed in the secondary school; and correct spelling and grammatical accuracy should be rigorously exacted in all written work during the whole course. The principles governing punctuation, diction, sentences, paragraphs, and the whole composition should be carefully studied; and practice in composition, oral as well as written, should extend throughout the secondary school period. Written exercises may well comprise letter-writing, narration, description, and easy exposition and argument. It is advisable that subjects for this work be taken from the student's personal experience, general knowledge, and studies other than English, as well as from his reading in literature. Special instruction in language and composition should be accompanied by concerted effort of teachers,

‡ The following statements are condensations of those in the Report of the College Entrance Examination Board. Teachers are advised to consult this report.

whatever subjects they teach, to cultivate in the student the habit of using good English in all recitations and exercises, whether oral or written.

LITERATURE. The second object requires intelligent reading in considerable amount. The student should read carefully, but his attention should not be so fixed upon details that he fails to appreciate the main purpose and the charm of what he reads. He should be trained in reading aloud, and should be encouraged to commit to memory notable passages both in verse and in prose. He should learn the most important facts in the lives of the authors whose works he reads, and know their place in literary history.

Candidates will have the option of taking either of two examinations: (1) a "Restricted" examination, based in part on a prescribed list of books; (2) a "Comprehensive" examination.

RESTRICTED EXAMINATION

The examination will be divided into two parts, each occupying two hours: *English A*, on grammar and composition, and the books for *Reading*; and *English B*, on the Books for *Study*.

English A

GRAMMAR AND COMPOSITION. The candidate may be asked to construe sentences, to parse words, and to correct mistakes in usage. The main test in composition will consist of one or more essays, developing a theme through several paragraphs; the subjects will be drawn from the books listed below under *Reading*, from the candidate's other studies, and from his personal knowledge and experience quite apart from reading. Several subjects for essays, perhaps eight or ten, will be given, from which the candidate may make his own selections.

BOOKS FOR READING. The candidate may be asked general questions, to test his knowledge and appreciation of the books read in preparation for this part of the examination. *He will also be required to present to the examiner a list of these books, signed by the principal of the school in which he studied.*

English B

In this part of the examination the candidate will be asked questions upon the content and form of the books prescribed for *Study*, and upon the meaning of words, phrases, and allusions. Questions may also be asked concerning the lives of the authors, their other works, and the periods of literary history to which they belong.

However accurate in subject-matter, no paper in either *English A* or *English B* will be considered satisfactory if it is seriously defective in punctuation, spelling, grammar, or other essentials of good usage.

PRESCRIBED BOOKS FOR STUDENTS ENTERING IN 1921 AND 1922

Reading

Two selections to be made from each group, except as otherwise provided under Group I.

GROUP I. CLASSICS IN TRANSLATION. The *Old Testament*, comprising at least the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther. The *Odyssey*, with the omission, if desired, of Books I, II, III, IV, V, XV, XVI, XVII. The *Aeneid*. The *Odyssey* and the *Aeneid* should be read in English translations of recognized literary excellence.

For any selection from this group a selection from any other group may be substituted.

GROUP II. DRAMA. Shakspeare: *The Merchant of Venice*, *As You Like It*, *Julius Caesar*.

GROUP III. PROSE FICTION. Dickens: *A Tale of Two Cities*. George Eliot: *Silas Marner*. Scott: *Quentin Durward*. Hawthorne: *The House of the Seven Gables*.

GROUP IV. ESSAYS, BIOGRAPHY, ETC. Addison and Steele: *The Sir Roger de Coverley Papers*, Irving: *The Sketch Book* (selections, about 175 pages). Parkman: *The Oregon Trail*.

GROUP V. POETRY. Selections from Tennyson and Browning; Scott: *The Lady of the Lake*. Coleridge: *The Ancient Mariner*. Arnold: *Sohrab and Rustum*.

Study

One selection to be made from each group.

GROUP I. DRAMA. Shakspeare: *Macbeth*; *Hamlet*.

GROUP II. POETRY. Milton: *L'Allégre*; *Il Penseroso*; *Comus*. Palgrave: *Golden Treasury* (First Series), Book IV, with special attention to Wordsworth, Keats, and Shelley.

GROUP III. ORATORY. Burke: *Speech on Conciliation with America*. Washington: *Farewell Address*. Webster: *First Bunker Hill Oration*. Lincoln: *Gettysburg Address*.

GROUP IV. ESSAYS. Macaulay: *Life of Johnson*. Carlyle: *Essay on Burns*, with a brief selection from Burns's Poems.

PRESCRIBED BOOKS FOR STUDENTS ENTERING IN 1923, 1924, AND 1925

Reading

From each group two selections to be made, except that for any book in Group V a book from any other group may be substituted.

GROUP I. Dickens : *A Tale of Two Cities*. George Eliot : *Silas Marner*. Scott : *Quentin Durward*. Stevenson : *Treasure Island* or *Kidnapped*. Hawthorne : *The House of the Seven Gables*.

GROUP II. Shakspeare : *The Merchant of Venice*; *Julius Caesar*; *King Henry V*; *As You Like It*.

GROUP III. Scott : *The Lady of the Lake*. Coleridge : *The Ancient Mariner*; and Arnold : *Sohrab and Rustum*. A collection of representative verse, narrative and lyric. Tennyson ; *Idylls of the King* (any four). The *Aeneid* or the *Odyssey* in a translation of recognized excellence, with the omission, if desired, of Books I-V, XV, and XVI of the *Odyssey*.

GROUP IV. *The Old Testament* : the chief narrative episodes in Genesis, Exodus, Joshua, Judges, Samuel, Kings, and Daniel, together with the books of Ruth and Esther. Irving : *The Sketch Book* (about 175 pages). Addison and Steele : *The Sir Roger de Coverley Papers*. Macaulay : *Lord Clive*. Parkman : *The Oregon Trail*. Franklin : *Autobiography*.

GROUP V. A modern novel. A collection of short stories (about 150 pages). A collection of contemporary verse (about 150 pages). A collection of prose writings on matters of current interest (about 150 pages). Two modern plays.

All selections from this group should be works of recognized excellence.

Study

One selection to be made from each group.

GROUP I. Shakspeare : *Macbeth*; *Hamlet*.

GROUP II. Milton : *L'Allegro*; *Il Penseroso*; and either *Comus* or *Lycidas*. Browning : *Cavalier Tunes*; *The Lost Leader*; *How They Brought the Good News from Ghent to Aix*; *Home Thoughts from Abroad*; *Home Thoughts from the Sea*; *Incident of the French Camp*; *Hervé Riel*; *Pheidippides*; *My Last Duchess*; *Up at a Villa—Down in the City*; *The Italian in England*; *The Patriot*; *The Pied Piper*; “*De Gustibus —*,” *Instans Tyrannus*; *One Word More*.

GROUP III. Macaulay : *Life of Johnson*. Carlyle : *Essay on Burns*, with a brief selection from Burns's Poems. Arnold : *Wordsworth*, with a brief selection from Wordsworth's Poems.

GROUP IV. Burke : *Speech on Conciliation with America*. A collection of orations, to include at least Washington's *Farewell Address*, Webster's *First Bunker Hill Oration*, and Lincoln's *Gettysburg Address*.

The requirements for the “Restricted” examination are the same as those of the College Entrance Examination Board. Students who have credit for the Board examination English A must take the Brown examination English B;

those who have credit for the Board examination English B must take the Brown examination English A.

COMPREHENSIVE EXAMINATION

This examination, occupying three consecutive hours, is intended to be a comprehensive test of the candidate's fitness to undertake college work in English. It is equivalent to the Board Comprehensive Examination.

The questions on grammar and composition will be similar in nature to those of the "Restricted" examination, and will afford the candidate an opportunity to show that he has a competent knowledge of English usage and can put his thoughts into good English.

The questions on literature will be designed to test power to understand and appreciate good literature rather than knowledge of particular books. Selections in prose and verse which the candidate presumably has not read will be set before him, and he will be questioned about their content and form. He will be expected to explain the meaning of passages of some difficulty; to distinguish between different styles and verse forms; and to show a knowledge of the simpler principles of structure in novels and plays, with illustrations from works with which he is familiar. It will therefore be necessary for him to have read with care a considerable amount of literature similar in kind to the books for *Reading* and *Study* specified above.

MATHEMATICS. ELEMENTARY ALGEBRA 1. *One unit.* The requirement includes the following subjects: the four fundamental operations for rational algebraic expressions; factoring, determination of highest common factor and lowest common multiple by factoring; fractions, including complex fractions, and ratio and proportion; linear equations, both numerical and literal, containing one or more unknown quantities; problems depending on linear equations; radicals, including the extraction of the square root of polynomials and of numbers; exponents, including the fractional and negative. *2. One-half unit.* The requirement includes quadratic equations, both numerical and literal; simple cases of equations with one or more unknown quantities, that can be solved by the methods of linear or quadratic equations; the binomial theorem for positive integral exponents; the formulae for the n th term, and the sum of the terms, of arithmetical and geometric progressions, with applications.

To fulfil the entrance requirement in Elementary Algebra both 1 and 2 must be presented. It is assumed that pupils will be required throughout the course to solve numerous problems which involve putting questions into equations. Some of these problems should be chosen from mensuration, from physics, and from commercial life. The use of graphical methods and illustrations, particularly in connection with the solution of equations, is also expected.

This requirement is the same as that of the College Entrance Examination Board in Mathematics a (i and ii).

PLANE GEOMETRY. *One unit.* The requirement in Plane Geometry covers the usual theorems and constructions of good text-books, including the general properties of plane rectilinear figures; the circle and the measurement of angles; similar polygons; areas; regular polygons and the measurement of the circle; the solution of numerous original exercises, including loci problems; applications to the mensuration of lines and plane surfaces.

Teachers of Geometry should lay stress on accuracy of statement and elegance of form as well as on clear and strict reasoning. Mere memorizing should be avoided. Special care should be taken that in the proof of a proposition no lines be drawn unless their construction is proved to be possible.

This requirement is the same as that of the College Entrance Examination Board in Mathematics c.

SOLID GEOMETRY. *One-half unit.* The requirement in Solid Geometry covers the usual theorems and constructions of good text-books, including the relations of planes and lines in space; the properties and measurements of prisms, pyramids, cylinders, and cones; the sphere and the spherical triangle; the solution of numerous original exercises, including loci problems; applications to the mensuration of surfaces and solids.

This requirement is the same as that of the College Entrance Examination Board in Mathematics d.

PLANE TRIGONOMETRY. *One-half unit.* The requirement in Plane Trigonometry includes definitions and relations of the six trigonometric functions as ratios; circular measurement of angles; proofs of principal formulae, in particular for the sine, cosine, and tangent of the sum and difference of two angles, of the double angle and half angle, the product expressions for the sum or the difference of two sines or of two cosines, etc.; the transformation of trigonometric expressions by means of these formulae; the solution of trigonometric equations of a simple character; the theory and use of logarithms (without the introduction of work involving infinite series); the solution of right and oblique triangles; practical applications.

This requirement is the same as that of the College Entrance Examination Board in Mathematics f.

ADVANCED ALGEBRA. *One-half unit.* The requirement in Advanced Algebra includes permutations and combinations, limited to simple cases; complex numbers, with graphical representation of sums and differences; determinants, chiefly of the second, third, and fourth orders, including the use of minors and the solution of linear equations; numerical equations of higher degree, and so much of the theory of equations, with graphical methods, as is necessary for their treatment, including Descartes's rule of signs and Horner's method, but not Sturm's functions or multiple roots.

This requirement is the same as that of the College Entrance Examination Board in Mathematics b.

LATIN.‡ ELEMENTARY LATIN. *Three units.* The reading without the prescription of particular authors and works shall not be less in amount than Caesar, *Gallic War*, Books I-IV; Cicero, the orations against Catiline, for the Manilian Law, and for Archias. The reading shall be selected from the following authors and works: Caesar, *Gallic War* and *Civil War*, and Nepos, *Lives*; Cicero, orations, letters, and *De Senectute*, and Sallust, *Catiline* and *Jugurthine War*.

Candidates will be examined in translation at sight of passages from Caesar and Cicero. The vocabulary, constructions, and range of ideas of the passages set will be suited to the preparation secured by the reading indicated above. They will be examined also upon the following prescribed reading: Cicero, orations for the Manilian Law and for Archias.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

The words, constructions, and range of ideas called for in the examination in composition will be such as are common in the reading of the years covered by the examination.

This requirement is the same as that of the College Entrance Examination Board in Latin 1, 2, 4.

ADVANCED LATIN. *One unit.* The reading shall not be less in amount than Virgil, *Aeneid*, Books I-VI. This reading shall be selected from Virgil, *Bucolics*, *Georgics*, and *Aeneid*, and Ovid, *Metamorphoses*, *Fasti*, and *Tristia*.

Candidates will be examined in translation at sight of passages from Virgil and Ovid. They will be examined also upon the following prescribed reading: Virgil, *Aeneid*, Books I, II, and either IV or VI, at the option of the candidate. The examination will include questions on subject-matter and meter.

This requirement is the same as that of the College Entrance Examination Board in Latin 5, 6.

TWO-YEAR LATIN. *Two units.* The reading should not be less in amount than Caesar, *Gallic War*, Books I-IV, and should be selected by the schools from Caesar, *Gallic War* and *Civil War*, and Nepos, *Lives*. Candidates will be examined in translation at sight of passages from the above authors, and in grammar and composition.

The examinations in grammar and composition will demand thorough knowledge of all regular inflections, all common irregular forms, and the ordinary syntax and vocabulary of the prose authors read in school, with ability to use this knowledge in writing simple Latin prose.

The words, constructions, and range of ideas called for in the examination

‡ For students presenting by examination the full four-unit requirement in Latin, the examinations of the College Entrance Examination Board in Latin 1, 2, 4, 5 will be accepted.

in composition will be such as are common in the reading of the years covered by the examination.

This requirement is practically the same as that of the College Entrance Examination Board in Latin 3.

GREEK. ELEMENTARY GREEK. Two units. The requirement in Elementary Greek includes: (1) Xenophon's *Anabasis*, Books I-IV, with attention not only to language, but to subject-matter as well; (2) grammar, including a familiar knowledge of inflection, word-formation, and ordinary syntax. This will be tested by: (a) questions on a passage from the *Anabasis*; (b) translation into Greek, with accents, of simple English sentences.

This requirement is the same as that of the College Entrance Examination Board in Greek *a* (i and ii), *b*, and *g*.

ADVANCED GREEK. One unit. The requirement in advanced Greek includes: (1) Three books of Homer's *Iliad* or *Odyssey*, with questions on meter, Homeric dialect, etc., or (upon request four weeks in advance of the examination) an equivalent amount of a prose author; (2) translation at sight of simple Attic prose or Homer; (3) translation into Greek, with accents, of a continuous passage of English narrative, based upon material similar to the *Anabasis*.

This requirement is the same as that of the College Entrance Examination Board in Greek *f* and *ch*.

FRENCH. ELEMENTARY FRENCH. FIRST YEAR. One unit. At the end of the first year the pupil should be able to pronounce French accurately, to translate at sight very easy French prose, to put into French very simple English sentences taken from the language of every-day life or based upon the portion of the French text read, and to answer questions on the rudiments of the grammar as defined below.

During the first year the work should comprise: Careful drill in pronunciation; the rudiments of grammar, including the inflection of the regular and the more common irregular verbs, the plural nouns, the inflection of adjectives, participles, and pronouns; the use of personal pronouns, common adverbs, prepositions, and conjunctions; the order of words in the sentence, and the elementary rules of syntax, including the simpler uses of the conditional and subjunctive; abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; the reading of from 100 to 175 duodecimo pages of graduated texts, with constant practice in translating into French easy variations of the sentences read (the teacher giving the English), and in reproducing from memory sentences previously read; writing French from dictation.

As no examination in first-year French is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University; see pages 33, 34.

ELEMENTARY FRENCH. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read and translate at sight easy French prose, to put into French simple English sentences taken from the language of everyday life or based upon the portion of the French text read, to write from dictation simple French sentences, and to answer questions on the rudiments of the grammar, as defined in the requirement for the first year, with the additions made below.

During the second year the work should comprise: The reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; constant practice, as in the previous year, in translating into French easy variations upon the texts read; frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; writing French from dictation; continued drill upon the rudiments of grammar, with constant application in the construction of sentences; mastery of the forms and use of pronouns, pronominal adjectives, and of all but the rare irregular verb forms.

Suitable texts for the second year are: About's *Le roi des montagnes*; Bruno's *Le tour de la France*; Daudet's easier short tales; La Bédollière's *La Mère Michel et son chat*; Erckmann-Chatrian's stories; Foa's *Contes biographiques* and *Le petit Robinson de Paris*; Foncin's *Le pays de France*; Labiche and Martin's *La poudre aux yeux* and *Le voyage de M. Perrichon*; Legouv   and Labiche's *La cigale chez les fourmis*; Malot's *Sans famille*; Mair  t's *La t  che du petit Pierre*; M  rim  e's *Colomba*; extracts from Michelet; Sarcey's *Le si  ge de Paris*; Verne's stories.

The combined requirement in first and second year Elementary French is the same as that of the College Entrance Examination Board in French *a*.

INTERMEDIATE FRENCH. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary French prose or simple poetry, to translate into French a connected passage of English based on the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of French of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving French paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts for the third year are: About's stories; Augier and Sandeau's *Le gendre de M. Poirier*; B  ranger's poems; Corneille's *Le Cid* and *Horace*; Copp  e's poems; Daudet's *La Belle-Nivernaise*; La Br  te's *Mon oncle et mon cur  *; Madame de S  vign  's letters; Hugo's *Hernani* and *La chute*; Labiche's plays; Loti's *P  cheur d'Islande*; Mignet's historical writings; Moli  re's *L'avare* and *Le bourgeois gentilhomme*; Racine's *Athalie*, *Andromaque*, and *Esther*; George Sand's plays and stories; Sandeau's *Mademoiselle de la Seigli  re*;

Scribe's plays; Thierry's *Récits des temps mérovingiens*; Thiers's *L'expédition de Bonaparte en Egypte*; de Vigny's *La canne de jonc*; Voltaire's historical writings.

This requirement is the same as that of the College Entrance Examination Board in French *b*.

GERMAN.‡ ELEMENTARY GERMAN. FIRST YEAR. *One unit.* At the end of the first year the pupil should be able to read at sight, and to translate, a passage of very easy dialogue or narrative prose, help being given upon unusual words and constructions, to put into German simple English sentences taken from the language of every-day life or based upon the text given for translation, and to answer questions upon the rudiments of the grammar, as defined below.

During the first year the work should comprise: Careful drill upon pronunciation; the memorizing and frequent repetition of easy colloquial sentences; drill upon the rudiments of grammar, that is, upon the inflection of the articles, of such nouns as belong to the language of every-day life, of adjectives, pronouns, weak verbs, and the more usual strong verbs; also upon the use of the more common prepositions, the simpler uses of the modal auxiliaries, and the elementary rules of syntax and word-order; abundant easy exercises designed not only to fix in mind the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; the reading of from 75 to 100 pages of graduated texts from a reader, with constant practice in translating into German easy variations upon sentences selected from the reading lesson (the teacher giving the English), and in the reproduction from memory of sentences previously read.

As no examination in first-year German is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University; see pages 33, 34.

ELEMENTARY GERMAN. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read at sight, and to translate, a passage of easy dialogue or narrative prose, help being given on unusual words and constructions, to put into German short English sentences taken from the language of every-day life or based upon the text given for translation, to write from dictation simple German sentences, and to answer questions upon the rudiments of grammar, as defined in the requirement for the first year, with the additions made below.

During the second year the work should comprise: The reading of from 150 to 200 pages of literature in the form of easy stories and plays; accompanying practice in the translation into German of easy variations upon the matter read and also in the offhand reproduction, sometimes orally and sometimes in writing, of the substance of short and easy selected passages; writ-

‡ An oral test forms a part of all entrance examinations in German.

ing German from dictation; continued drill upon the rudiments of the grammar and mastery of the adjective declensions, the passive, and word-order, in order that the pupil may use his knowledge with facility in the formation of sentences and state his knowledge correctly in the technical language of grammar.

Stories suitable for the elementary course can be selected from the following list: Andersen's *Märchen* and *Bilderbuch ohne Bilder*; Arnold's *Fritz auf Ferien*; Baumbach's *Die Nonna* and *Der Schwiegersohn*; Gerstäcker's *Germelshausen*; Heyse's *L'Arrabbiata*, *Das Mädchen von Treppi*, and *Anfang und Ende*; Hillern's *Höher als die Kirche*; Jensen's *Die braune Erica*; Leander's *Träumereien* and *Kleine Geschichten*; Seidel's *Märchen*; Stökl's *Unter dem Christbaum*; Storm's *Immensee* and *Geschichten aus der Tonne*; Zschokke's *Der zerbrochene Krug*.

Among shorter plays the best available are perhaps Benedix's *Der Prozess*, *Der Weiberfeind*, and *Günstige Vorzeichen*; Elz's *Er ist nicht eifersüchtig*; Wichert's *An der Majorsecke*; Wilhelmi's *Einer muss heiraten*. It is recommended, however, that not more than one of these plays be read. The narrative style should predominate. A good selection of reading matter for the second year would be Andersen's *Märchen*, or *Bilderbuch*, or Leander's *Träumereien*, to the extent of about forty pages. After that, such a story as *Das kalte Herze* or *Der zerbrochene Krug*; then *Höher als die Kirche* or *Immensee*; next a good story by Heyse, Baumbach, or Seidel; lastly *Der Prozess*.

The combined requirement in first and second year elementary German is the same as that of the College Entrance Examination Board in German *a*.

INTERMEDIATE GERMAN. *One unit.* At the end of the intermediate course the pupil should be able to read at sight German prose of ordinary difficulty, whether recent or classical; to put into German a connected passage of simple English, paraphrased from a given text in German; to answer any grammatical questions relating to usual forms and essential principles of the language, including syntax and word-formation, and to translate and explain a passage of classical literature taken from some text previously studied.

The work should comprise, in addition to the elementary course, the reading of about 400 pages of moderately difficult prose and poetry, with constant practice in giving, sometimes orally and sometimes in writing, paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; writing connected German passages from dictation; also grammatical drill upon the less usual strong verbs, the use of articles, cases, auxiliaries of all kinds, tenses and modes (with special reference to the infinitive and subjunctive), and likewise upon word-order and word-formation.

Suitable reading matter for the third year can be selected from such works as the following: Ebner-Eschenbach's *Die Freiherren von Gemperlein*; Freytag's *Die Journalisten* and *Bilder aus der deutschen Vergangenheit*, — for example, *Karl der Grosse*, *Aus den Kreuzzügen*, *Doktor Luther*, *Aus dem Staat*

Friedrichs des Grossen; Fouqué's *Undine*; Gerstäcker's *Irrfahrten*; Goethe's *Hermann und Dorothea* and *Iphigenie*; Heine's poems and *Reisebilder*; Hoffmann's *Historische Erzählungen*; Lessing's *Minna von Barnhelm*; Meyer's *Gustav Adolf's Page*; Moser's *Der Bibliothekar*; Riehl's *Novellen*,—for example, *Burg Neideck*, *Der Fluch der Schönheit*, *Der stumme Ratsherr*, *Das Spielmannskind*; Rosegger's *Waldheimat*; Schiller's *Der Neffe als Onkel*, *Der Geisterseher*, *Wilhelm Tell*, *Die Jungfrau von Orleans*, *Das Lied von der Glocke*, *Balladen*; Scheffel's *Der Trompeter von Säckingen*; Wildenbruch's *Das edle Blut*; a good anthology of German verse (such as Hatfield's or von Klenze's).

This requirement is the same as that of the College Entrance Examination Board in German *b*.

SPANISH. ELEMENTARY SPANISH. FIRST YEAR. *One unit.* At the end of the elementary course the pupil should be able to pronounce Spanish accurately, to read at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of every-day life or based upon a portion of the Spanish text read, and to answer questions on the rudiments of the grammar, as defined below.

During the first year the work should comprise: Careful drill in pronunciation; the rudiments of grammar, including the conjugation of the more regular and the more common irregular verbs, the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax; abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the use of natural forms of expression; the reading and accurate rendering into good English of from 100 to 150 duodecimo pages of graduated texts, with translation into Spanish of easy variations of the sentences read; writing Spanish from dictation.

As no examination in first-year Spanish is given by the College Entrance Examination Board, this examination must be taken in September at Brown University; see pages 33, 34.

ELEMENTARY SPANISH. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read and translate at sight easy Spanish prose, to put into Spanish simple English sentences taken from the language of every-day life, or based upon a portion of the text read, to write from dictation simple Spanish sentences, and to answer questions on the rudiments of the grammar, as defined in the requirement for the first year, with the additions made below.

During the second year the work should comprise: The reading of from 250 to 400 pages of easy modern prose in the form of stories, plays, or historical or biographical sketches; constant practice, as in the previous year, in translating into Spanish easy variations upon the text read; frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; writing Spanish from dictation; continued drill upon the rudiments of grammar, with constant application in the construction of sentences; mastery of the forms

and use of pronouns, pronominal adjectives, and of all but the rare irregular verb forms.

Suitable texts for the second year are: Valera's *El Pájaro verde*; Alarcón's *Novelas Cortas*; Valdés's *José* and *La Hermana San Sulpicio*; selections from the works of Mesonero Romanos; Galdós's *Marianela*; Quintana's *La Vida de Nuñez de Balboa*; Padre Isla's version of *Gil Blas*; Carrión and Aza's *Zaraguëta*.

The combined requirement in first and second year Elementary Spanish is the same as that of the College Entrance Examination Board in Spanish *a*.

INTERMEDIATE SPANISH. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary Spanish prose or simple poetry, to translate into Spanish a connected passage of English based upon the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of Spanish of ordinary difficulty, a portion to be in the dramatic form; constant practice in giving Spanish paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

Suitable texts for the third year are Becquer's *Tales, Legends, and Poetry*; Valera's *Pepita Jiménez*; Ibanez's *La Barraca*; Galdós's *Doña Perfecta*; Echegaray's *El Gran Galeoto*; Ayala's *Consuelo*; Gil y Zárate's *Guzmán el Bueno*; Pereda's *Pedro Sánchez*; Hills and Morley's *Modern Spanish Lyrics*; Ford's *Selections from Don Quijote*.

This requirement is the same as that given by the College Entrance Examination Board in Spanish *b*.

ITALIAN. ELEMENTARY ITALIAN. FIRST YEAR. *One unit.* At the end of the first year the pupil should be able to pronounce Italian accurately, to translate at sight very easy Italian prose, to put into Italian very simple English sentences taken from the language of every-day life or based upon a portion of the Italian text read, and to answer questions on the rudiments of grammar as defined below.

During the first year the work should comprise: Careful drill in pronunciation, the rudiments of grammar, including the conjugation of the regular verbs and the more common irregular verbs (including those that suffer orthographical and radical changes); the inflection of nouns, adjectives, and pronouns, and the elementary rules of syntax, including the simpler uses of the subjunctive; abundant easy exercises, designed not only to fix in the memory the forms and principles of grammar, but also to cultivate readiness in the reproduction of natural forms of expression; the reading and accurate translation into good English of from 100 to 150 duodecimo pages of graduated texts, with translation into Italian of easy variations of the sentences read; writing Italian from dictation.

ELEMENTARY ITALIAN. SECOND YEAR. *One unit.* At the end of the second year the pupil should be able to read and translate at sight easy Italian prose, to put into Italian simple English sentences taken from the language of every-day life, or based upon a portion of the Italian text read, to write from dictation simple Italian sentences, and to answer questions on the grammar.

During the second year the work should comprise: The reading of from 250 to 400 pages of easy prose or poetry; constant practice in translating into Italian easy variations upon the text read; frequent abstracts, sometimes oral and sometimes written, of portions of the text already read; writing Italian from dictation; continued drill upon the grammar, with constant application in the construction of sentences.

Suitable texts for the second year are: Manzoni's *I Promessi Sposi*, Levi; *Selections from Carducci*, Marinoni.

INTERMEDIATE ITALIAN. *One unit.* At the end of the intermediate course the pupil should be able to read at sight ordinary Italian prose or poetry, to translate into Italian a connected passage of English based upon the text read, and to answer questions involving a more thorough knowledge of syntax than is expected in the elementary course.

The work should comprise the reading of from 400 to 600 pages of Italian, including a considerable amount of Dante's *Divina Commedia*; constant practice in giving Italian paraphrases, abstracts, or reproductions from memory of selected portions of the matter read; the study of a grammar of moderate completeness; writing from dictation.

As no examinations in Italian are given by the College Entrance Examination Board, the examinations in this subject must be taken in September at Brown University; see pages 33, 34.

HISTORY. ANCIENT HISTORY. *One unit.* Special attention to Greek and Roman history, but including also a short introductory study of the more ancient nations and the chief events of the early Middle Ages, down to the death of Charlemagne.

MEDIEVAL AND MODERN EUROPEAN HISTORY. *One unit.* From the death of Charlemagne to the present time.

ENGLISH HISTORY. *One unit.*

AMERICAN HISTORY AND CIVIL GOVERNMENT. *One unit.*

The examinations in history will be so framed as to require comparison and judgment on the pupil's part rather than mere memory. The examinations will presuppose the use of good text-books, at least 600 duodecimo pages of collateral reading, and practice in written work. Historical novels, plays, or poems will not be accepted in fulfilment of the requirement of collateral reading. The methods of instruction which the examinations in History and Civil Government presuppose are substantially identical with those set forth in

A History Syllabus for Secondary Schools (D. C. Heath & Co.); and the references for collateral reading given in that manual may be taken as indications of the kind of collateral reading that should be done.

These requirements are the same as those of the College Entrance Examination Board in History *a, b, d, e*.

PHYSICS. *One unit.* Preparation in Physics should include: (1) The study of one standard text-book, for the purpose of obtaining a connected and comprehensive view of the subject. The student should be given opportunity and encouragement to consult other scientific literature. (2) Instruction by lecture-table demonstrations, to be used mainly for illustration of the facts and phenomena of physics in their qualitative aspects and in their practical applications. (3) Individual laboratory work, consisting of experiments requiring at least the time of thirty double periods. The experiments performed by each student should number at least thirty. The work should be so distributed as to give a wide range of observation and practice. The aim of laboratory work should be to supplement the pupil's fund of concrete knowledge and to cultivate his power of accurate observation and clearness of thought and expression. The exercises should be chosen with a view to furnishing forceful illustrations of fundamental principles and their practical applications. They should be such as yield results capable of ready interpretation, obviously in conformity with theory, and free from the disguise of unintelligible units. Slovenly work should not be tolerated, and the effort for precision should not lead to the use of apparatus or processes so complicated as to obscure the principle involved.

Throughout the whole course special attention should be paid to the common illustrations of physical laws and to their industrial applications.

In the solution of numerical problems, the student should be encouraged to make use of the simple principles of algebra and geometry to reduce the difficulties of solution, but unnecessary mathematical difficulties should be avoided, and care should be exercised to prevent the student from losing sight of the concrete facts in the manipulation of symbols.

Every candidate must present as a part of the examination a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Physics.

CHEMISTRY. *One unit.* The following outline includes only the indispensable topics which must be studied in the class-room and laboratory. The material is, for the most part, common to all elementary text-books and laboratory manuals. The order of presentation will naturally be determined by the teacher.

OUTLINE. The chief physical and chemical characteristics, the preparation and the recognition of the following elements and their chief compounds: *oxygen, hydrogen, carbon, nitrogen, chlorine, bromine, iodine, fluorine, sulphur*, phosphorus, silicon, potassium, *sodium*, calcium, magnesium, *zinc*, copper, mercury, silver, aluminum, *lead*, tin, *iron*, manganese, chromium.

More detailed study should be confined to the italicized elements and to a restricted list of compounds, such as: water, hydrochloric acid, carbon-monoxide, carbon-dioxide, nitric acid, ammonia, sulphur dioxide, sulphuric acid, hydrogen-sulphide, sodium-hydroxide.

Attention should be given to the atmosphere (constitution and relation to animal and vegetable life), flames, acids, bases, salts, oxidation and reduction, crystallization, manufacturing processes, familiar substances (illuminating gas, explosives, baking powder, mortar, glass, steel, common alloys, porcelain, soap).

Attention should be given also to combining proportions by weight and volume; calculations founded on these and on Boyle's and Charles's laws; symbols and nomenclature (with careful avoidance of special stress, since these are non-essential); atomic theory, atomic weights and valency in a very elementary way; nascent state; natural grouping of the elements; solution (solvents and solubility of gases, liquids, and solids; saturation); ionization; mass action and equilibrium; strength (=activity) of acids and bases; conservation and dissipation of energy; chemical energy (very elementary); electrolysis. Chemical terms should be defined and explained, and the pupil should be able to illustrate and apply the ideas they embody. The theoretical topics are not intended to form separate subjects of study, but should be taught only so far as is necessary for the correlation and explanation of the experimental facts.

It is recommended that the candidate's preparation in chemistry should include: (1) Individual laboratory work, comprising at least forty exercises; (2) instruction by lecture-table demonstrations, to be used mainly as a basis for questioning upon the general principles involved in the pupil's laboratory investigations; (3) the study of at least one standard text-book, to the end that the pupil may gain a comprehensive and connected view of the most important facts and laws of elementary chemistry.

Every candidate must present as a part of the examination, a note-book, certified by the teacher, containing in the candidate's own language a description of his laboratory exercises, with a careful record of the steps, observations, and results of each exercise. The note-book must afford clear evidence of the pupil's ability to make accurate observations and to draw direct conclusions.

This requirement is the same as that of the College Entrance Examination Board in Chemistry.

BOTANY. *One unit.* The course should include a careful study of the general principles of Anatomy and Morphology, Physiology and Ecology; also the natural history of the plant groups, and classification.

Individual laboratory work by the student is essential and should receive at least double the amount of time given to recitation. Records of the laboratory work, properly certified by the teacher, in which stress is laid upon accurate drawing and precise description, must be presented at the time of examination.

Where special circumstances, such as exceptional difficulty of obtaining material, prevent the completion of the entire amount while allowing its equivalent in thoroughness, it is recommended that some of the minor topics be omitted rather than that the attempt be made to cover all more superficially. To provide for this contingency, the examination papers will always include a number of alternative questions.

This requirement is the same as that of the College Entrance Examination Board in Botany.

PHYSIOGRAPHY. *One unit.* The candidate's preparation should include: (1) The study of one of the leading secondary text-books in physical geography, that a knowledge may be gained of the essential principles and of well-selected facts illustrating those principles; (2) individual laboratory work comprising at least forty exercises. From one-third to one-half of the candidate's class-room work should be devoted to laboratory exercises. In the autumn and spring, field trips should take the place of laboratory exercises. Properly attested reports of field and laboratory work must be presented at the time of examination.

This requirement is the same as that of the College Entrance Examination Board in Geography.

ASTRONOMY. *One unit.* The requirement in Astronomy demands class instruction in the elementary principles of the science, including observations of the heavens with reference to the positions and movements of the heavenly bodies. The following are the chief topics to be studied: *The Celestial Sphere*: designation of the directions of a heavenly body. *The Earth*: its axial rotation; time, latitude, longitude; its orbital revolution; precession; aberration, the seasons, equation of time, the calendar. *The Moon*: its axial rotation, orbital motion, librations, phases, surface features, physical condition; lunar and solar eclipses. *The Sun*: its rotation, physical characteristics, light, and heat. *The Planets*: apparent and real motions, individual characteristics. *The Law of Gravitation*: its control of the solar system; the tides. *Comets and Meteors*: their nature and motions. *The Stars*: designation, classification by constellations, motions, distance, brightness, variables. *Stellar Systems*: clusters, nebulae; the stellar universe, cosmogony.

As no examination in Astronomy is given by the College Entrance Examination Board, the examination in this subject must be taken in September at Brown University; see pages 33, 34.

ADMISSION TO ADVANCED STANDING

A candidate for admission to advanced standing, unless coming from an approved institution of collegiate rank, will be examined in the studies required for entrance to Brown University (unless admitted by certificate) and in those already pursued by the class which he desires to enter.

A candidate for admission to advanced standing who comes from an approved institution of collegiate rank may receive credit, without examination, for work done at that institution. He will be required, however, to present, or to have had accepted elsewhere, the same entrance subjects as are demanded of students entering Brown University without advanced credit; and to cover, or to have covered, all the prescribed subjects in the course leading to the desired degree at Brown University. The Committee on Registration and Attendance will determine the amount of credit that he may receive, on receipt of the following papers, all of which should be sent to the Registrar of Brown University: (1) a formal statement, made out and signed by the proper official of the institution previously attended, showing all preparatory subjects accepted by it for entrance (specifying whether by examination or certificate), and all the courses attended at college, with their catalogue numbers, and the standing attained therein by the student; (2) a similar official statement as to whether the student has completed the amount of work regularly required up to the time of his withdrawal from the institution previously attended, or has done work in excess thereof, or of less amount, or has incurred conditions or probation; (3) a marked catalogue of the institution previously attended, describing the subjects taken; (4) a letter of honorable dismissal from the institution last attended.

Every candidate for a bachelor's degree, admitted to advanced standing, must remain in residence at the University at least one year before receiving his degree, and must take in regular course the full amount of work ordinarily required during the academic year.

ADMISSION OF SPECIAL STUDENTS

Mature persons of good character who desire to pursue some special subjects and who have had the requisite preliminary training are allowed to enter the various courses of study in the University without becoming candidates for a degree.

Applicants for registration as special students must present to the Registrar, on or before August 1 if possible, a certified and detailed statement of the nature and extent of their preparatory work, including testimonials of character and ability. In case a student has attended more than one institution, he must present credentials from each of them. Applicants must satisfy the Committee on Registration and Attendance, by passing the entrance exami-

nations or presenting certificates, that they are qualified to pursue the courses desired.

Special students are subject to the same regulations regarding attendance and examinations as candidates for degrees; they must take fifteen hours of class-room work a week unless satisfactory reasons for a smaller assignment are presented.

REGISTRATION AND ENROLMENT OF UNDERGRADUATES

REGISTRATION. In September all new students, whether candidates for a degree or special students, must report at the Administration Building between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on the Monday or Tuesday preceding the opening of the first semester (for 1921, September 26 or 27), and fill out registration cards for the whole of the ensuing year. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged. All new students must present at or before the time of registration all credentials necessary for admission as candidates for a degree or as special students.

In May of each year all undergraduates in residence, whether candidates for a degree or special students, must obtain at the Registrar's office registration cards, which must be filled out with a list of the courses elected for the whole of the ensuing year and returned not later than June 1. Failure to comply with this rule will be treated as late registration and a fee of three dollars will be charged. *All members of the class of 1923 must file with their registration cards a statement from the Committee on Educational Advice and Direction.* See Requirements for Concentration, pages 59, 60, 63.

When semester courses are grouped in one paragraph (*e.g.* Biology 1, 2), they constitute a year course and neither semester may be elected independently unless specific statement to the contrary is made. In starred courses a final mark will be given at the end of the course, the mark given at the end of the first semester being regarded as temporary.

Changes in registration will be allowed only on presentation of sufficient reasons to the Committee on Registration and Attendance. Requests for permission to make changes in September should be sent to the Registrar before September 7, if possible. Requests for permission to make changes for the second semester must be presented to the Registrar before the beginning of the examinations of the first semester, unless these requests are the result of failures, in which case they must be presented in writing to the Registrar two days before the opening of the second semester. A fee of three dollars is charged for changes.

The Committee on Registration and Attendance will be in session at the Administration Building between 9 a.m. and 1 p.m. and between 2.30 p.m. and 5 p.m. on the two days preceding the opening of each semester.

ENROLMENT. All students must report at the Registrar's office between 9 a.m. and 1 p.m. or between 2.30 p.m. and 5 p.m. on one of the two days

preceding the opening of each semester and have their names checked as enrolled. A receipt from the Comptroller for the required payment of twenty-five dollars must be presented. Failure to report will be treated as late enrolment and a fee of three dollars will be charged.

REQUIREMENTS FOR DEGREES

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REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

For Students who entered before 1919

I. PRESCRIBED SUBJECTS

Ancient Languages (either Latin or Greek, or both). Six hours. At least three hours must be taken in the Freshman year, and the six hours must be completed by the end of the Sophomore year.

French or German. Six or more hours. Including the amount presented for admission, every student must complete before graduation at least four years' work in French or four years' work in German. A minimum of six hours must be taken in college, of which at least three hours must be taken in the Freshman year. Students who present the full entrance requirement in both Greek and Latin and who elect six hours of Greek and Latin in college will not be required to take more than six hours of modern language in college.

Mathematics. Three hours. Freshman year.

English Composition and Rhetoric. Three hours. First semester, Freshman year. Second semester, Sophomore year.

English Literature. Three hours. Second semester, Freshman year. First semester, Sophomore year.

European History. Three hours. Sophomore or Junior year.

Physical or Natural Science. A three-hour course continuous through the year. Freshman, Sophomore, or Junior year.

Economics, Social Science, Political Science. A year course in any one, or a semester course in any two. Three hours. Sophomore, Junior, or Senior year.

Philosophy. A three-hour course continuous through the year. Sophomore or Junior year.

II. REQUIREMENTS ARRANGED BY YEARS

FRESHMAN YEAR

I. REQUIRED COURSES. *Latin* or *Greek*, three hours; *French* or *German*, three hours; *Mathematics*, three hours; *English*, three hours.

II. ELECTIVE COURSES. One three-hour course continuous through the year must be chosen from the following list: *Latin, Greek, French, German, Spanish, Chemistry, Physics, Botany, Biology, Geology, Astronomy*.

SOPHOMORE YEAR

That portion of the required work in ancient languages, modern languages, and English, not completed in the Freshman year, and other required and elective courses sufficient to make a total of fifteen hours a week.

JUNIOR YEAR

The required History, Philosophy, and Physical or Natural Science, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY

For Students who entered before 1919

I. PRESCRIBED SUBJECTS

Mathematics. Three hours. Freshman year. This subject may be omitted by students who intend to substitute Argumentation in the Sophomore year.

English Composition and Rhetoric. Three hours. First semester, Freshman year. Second semester, Sophomore year.

English Literature. Three hours. Second semester, Freshman year. First semester, Sophomore year.

French or German. Including the amount presented for admission, every student must complete before graduation four years' work in French or four years' work in German. At least three hours must be taken in the Freshman year.

Biology. Three hours. First semester. Freshman or Sophomore year.

Biology or Botany. Three hours. Second semester. Freshman or Sophomore year.

Physics, Chemistry, Botany, Geology, or Astronomy (only one of this group required). Three hours. Freshman or Sophomore year. This requirement does not apply to students who have presented Physics and Chemistry for admission.

Classical Civilization (Greek 15, Latin 16). Three hours. Freshman or Sophomore year. Freshman year for students who do not take Mathematics.

European History. Three hours. Freshman, Sophomore, or Junior year.

Economics, Social Science, Political Science. A year course in any one, or a semester course in any two. Three hours. Sophomore, Junior, or Senior year.

Philosophy. A three-hour course continuous through the year. Sophomore or Junior year.

Argumentation (English 7, 8). Three hours. Sophomore year. For students who have not taken Mathematics in the Freshman year.

II. REQUIREMENTS ARRANGED BY YEARS

FRESHMAN YEAR

I. REQUIRED COURSES. *English; French or German; Mathematics* (for students who do not intend to substitute Argumentation in the Sophomore year); *Classical Civilization (Greek 15, Latin 16)* (for students who do not take Mathematics).

II. ELECTIVE COURSES. Two three-hour courses continuous through the year must be chosen from the following list: *Latin, Greek, French, German, Spanish, Classical Civilization (Greek 15, Latin 16), History, Chemistry, Physics, Botany, Biology, Geology, Astronomy.*

SOPHOMORE YEAR

That portion of the required work in modern languages not completed in the Freshman year.

Biology or Biology and Botany; for students who have not taken this course in the Freshman year.

Physics, Chemistry, Botany, Geology, or Astronomy; for students who have not presented both Physics and Chemistry for admission or taken a course in Physical Science in the Freshman year.

Argumentation (English 7, 8); for students who have not taken Mathematics in the Freshman year.

Classical Civilization (Greek 15, Latin 16); for students who have not taken this course in the Freshman year.

English.

Other required and elective courses sufficient to make a total of fifteen hours a week.

JUNIOR YEAR

The required History and Philosophy, if not previously taken, and other required and elective courses sufficient to make a total of fifteen hours a week.

During the Junior and Senior years a student must take at least four courses outside the department chosen for special work. See Requirements for Concentration, pages 59, 60, 63.

SENIOR YEAR

All required courses not previously taken, and elective courses sufficient to make a total of fifteen hours a week.

III. REQUIREMENTS FOR CONCENTRATION

At the close of the Sophomore year each candidate for the degree of Bachelor of Philosophy who entered before 1919 must choose from the following list a department in which he intends to do special work during the Junior and Senior years, and must elect at least three courses of three hours a year each in this department. If he has not already taken a three-hour year course in the department chosen, he must elect four courses. The selection of these courses must be made in consultation with the head of the department and must be approved by him. When two departments are combined, the selection must be made in consultation with the head of the department first named.

At any time before the beginning of the Senior year a student may, with the approval of the Committee on Registration and Attendance, change the department in which he is to do special work.

With the approval of the department in which the student is doing special work, he may count as the equivalent of one course work which does not require regular class-room attendance.

Students may substitute the new requirement. See page 63.

DEPARTMENTS IN WHICH SPECIAL WORK MAY BE TAKEN

Art.

Art, and Greek Literature and History.

Art, and Roman Literature and History.

Art, and Music.

Art, and History.

Astronomy.

Astronomy, and Civil Engineering.

Astronomy, and Physics.

Astronomy, and Mathematics.

Astronomy, and Geology.

Biblical Literature and History.

Biblical Literature and History, and Greek Literature and History.

Biblical Literature and History, and Philosophy.

Biology.

Botany.

Botany, and Biology.

Chemistry.

Civil Engineering.

Economics.

Education.
 Education, and Philosophy.
 Education, and Social and Political Science.
 Education, and History.
 Electrical Engineering.
 English.
 Geology.
 Germanic Languages and Literatures.
 Greek Literature and History.
 Greek Literature and History, and Roman Literature and History.
 Greek Literature and History, and Biblical Literature and History.
 Greek Literature and History, and Art.
 History.
 Mathematics.
 Mechanical Engineering.
 Mechanics and Mechanical Drawing.
 Mechanics, and any Engineering department.
 Philosophy.
 Physics.
 Roman Literature and History.
 Roman Literature and History, and Art.
 Roman Literature and History, and Greek Literature and History.
 Roman Literature and History, and Indo-European Philology.
 Romance Languages and Literatures.
 Social and Political Science.

NEW REQUIREMENTS FOR THE DEGREE OF BACHELOR OF ARTS

For Students who entered in 1919 or thereafter

English Composition and Rhetoric. Three hours for two semesters. Students wishing to be excused from this requirement may present themselves for a proficiency test at the beginning of the year. Students who attain a grade of at least *B* in the first semester will be excused from further required work in this subject.

English Literature. Three hours for one semester.

English Literature, or Biblical Literature, or Art, or Music. Three hours for one semester.

Ancient Languages (either Latin, or Greek, or both). Six hours for a year.

Modern Languages. Including that presented for admission, at least two years in one modern language must be completed. One year must be taken in

college unless three units, two of which are in one language, are presented for admission.

History. Three hours for a year. Students presenting for admission Medieval and Modern European History, or English History, but not American History, must take a course in American History. Other students must take a course in European History.

Economics, Social Science, Political Science. A year course in any one, or a semester course in any two.

Philosophy. A three-hour course continuous through the year.

Mathematics, or Astronomy, or Physics, or Chemistry. A three-hour course continuous through the year.

Biology, or Botany, or Geology. A three-hour course continuous through the year. Students presenting equivalents will be excused by the Committee on Registration and Attendance.

REQUIREMENTS ARRANGED BY YEARS

Freshman Year. Orientation Lectures; English; Ancient Languages; Mathematics, or Astronomy, or Physics, or Chemistry; Biology, or Botany, or Geology; one other required or elective course.

Sophomore Year. That portion of the requirement in Ancient Languages, English, and History not completed in the Freshman year; other required and elective courses to make a total of fifteen hours.

Junior Year. The required Philosophy, if not previously taken, and other required and elective courses sufficient to make fifteen hours per week.

Senior Year. All required courses not previously taken, and elective courses sufficient to make fifteen hours per week.

NEW REQUIREMENTS FOR THE DEGREE OF BACHELOR OF PHILOSOPHY

For Students who entered in 1919 or thereafter

English Composition and Rhetoric. Three hours for two semesters. Students wishing to be excused from this requirement may present themselves for a proficiency test at the beginning of the year. Students who attain a grade of at least *B* in the first semester will be excused from further required work in this subject.

English Literature. Three hours for one semester.

English Literature, or Biblical Literature, or Art, or Music. Three hours for one semester.

Foreign Languages. Including that presented for admission, four years in

two languages other than English must be completed, at least two of which must be in one modern language. One year must be taken in college unless at least six years are presented for admission.

Classical Civilization (Greek 15, Latin 16). Three hours for a year.

History. Three hours for a year. Students presenting for admission Medieval and Modern European History, or English History, but not American History, must take a course in American History. Other students must take a course in European History.

Economics, Social Science, Political Science. Three hours for a year. A year course in any one, or a semester course in any two.

Philosophy. Three hours for a year.

Mathematics. Three hours for a year. Students presenting by examination two half-units of Mathematics beyond the minimum amount required for admission will be excused from this requirement by the Committee on Registration and Attendance.

Physics, or Chemistry, or Botany, or Geology, or Astronomy. A three-hour course continuous through the year. This requirement does not apply to students who have presented Physics and Chemistry for admission.

Biology. Three hours for one semester. Students presenting equivalents will be excused from this requirement by the Committee on Registration and Attendance.

Biology or Botany. Three hours for one semester. Students presenting equivalents will be excused from this requirement by the Committee on Registration and Attendance. Students electing Botany in the other science group must take Biology.

REQUIREMENTS ARRANGED BY YEARS

Freshman Year. Orientation Lectures; English; Foreign Language; Mathematics; Biology, or Biology and Botany; Physics, or Chemistry, or Botany, or Geology, or Astronomy. Students excused from a portion of this required work will substitute other required courses or electives. With the consent of the Committee on Registration and Attendance one required course may be postponed to the Sophomore year.

Sophomore Year. History; Classical Civilization; that portion of the required work in English not completed in the Freshman year; other required and elective courses to make a total of fifteen hours.

Junior Year. The required Philosophy, unless previously taken, and other required and elective courses sufficient to make fifteen hours per week.

Senior Year. All required courses not previously taken, and elective courses sufficient to make fifteen hours per week.

REQUIREMENTS FOR CONCENTRATION FOR THE DEGREE OF BACHELOR OF ARTS OR BACHELOR OF PHILOSOPHY

For students who entered in 1919 or thereafter

Before the end of the Sophomore year every student must confer with the Committee on Educational Advice and Direction and arrange a coördinated and progressive program of courses, taking into consideration his scholarly ambitions or his prospective career. This program must comprise at least four year-courses in the case of candidates for the degree of Bachelor of Arts, and five in the case of candidates for the degree of Bachelor of Philosophy; of these at least three and four respectively must be taken in the Junior and Senior year. Not more than one elementary course can be counted in fulfillment of this requirement.

With the consent of the Committee changes in concentration may be made during the Junior year.

SUMMARY OF CHANGES FROM REQUIREMENTS PREVIOUSLY IN FORCE

Bachelor of Arts, Admission: Total requirement in Language reduced from five units to four (for students presenting Latin), or three (for students presenting Greek) — elective units increased from three to four or five. In place of specific requirement in Ancient History, one unit required in Ancient History, or Medieval and Modern History, or English History, or American History.

Bachelor of Arts, College Requirements: English Composition and Rhetoric: under certain conditions students excused from whole or part of year course previously required. English Literature: in place of year course previously required students allowed to take for the second semester English Literature, or Biblical Literature, or Art, or Music. Modern Language: reduction of two years in amount required in one Language, definite prescription of two year courses in college discontinued. History: required year course to be European or American according to the History presented for admission. Mathematics: in place of year course previously required, students allowed to choose a year course in Mathematics, or Astronomy, or Physics, or Chemistry. Science: in place of general requirement of a year course in science, students required to take a year course in Biology, or Botany, or Geology. Requirements in Philosophy, and in Economics, Social Science, Political Science remain unchanged.

Bachelor of Philosophy, Admission. The three units required in Languages other than English need not include one in Modern Language.

Bachelor of Philosophy, College Requirements: Same changes as for Bachelor of Arts in English Composition and Rhetoric, English Literature, History. Foreign Languages: reduction of two years in amount required in one Modern Language. Science: Botany added to options. Mathematics: year course required for students entering in 1920. Under certain conditions students excused from requirement. No change in former requirements in Classical Civilization, Biology, or Biology and Botany, Economics, Social Science, Political Science, Philosophy.

REQUIREMENTS FOR THE DEGREE OF BACHELOR OF SCIENCE IN ENGINEERING

FRESHMAN YEAR

Mathematics 17	Mathematics 18
Engineering 1	Engineering 2
Engineering 3	Mathematics 50
English 1	‡ English 48
Chemistry 1, or	Chemistry 2, or
Approved substitute	Approved substitute

If Chemistry is presented for admission, a substitute approved by the department may be elected.

SUMMER VACATION

During part of the vacation between the Sophomore and Junior years a course in either surveying (*Engineering 5*) or shop practice (*Engineering 6*) is required.

SOPHOMORE YEAR

Mathematics 19	Mathematics 20
Economics 1	Political Science 1
Physics 1	Physics 2
Engineering 7	Engineering 8
‡ English 49	English 2

‡ Students whose work in English 1 is satisfactory to the department may take English 2 in place of English 48 in the second semester of the Freshman year, and substitute some other course for English 49, 2 in the Sophomore year.

JUNIOR YEAR

Engineering 9	Engineering 10
Engineering 11	Engineering 12
Engineering 13	Engineering 14
Engineering 16	Engineering 15
‡ Approved elective (3 hours)	‡ Approved elective (3 hours)

SENIOR YEAR

Engineering 17	Engineering 18
Engineering 19	Engineering 20
Engineering electives (6 hours)	Engineering electives (6 hours)
‡ Approved electives (6 hours)	‡ Approved electives (6 hours)

REGULATIONS UNDER WHICH A STUDENT MAY TAKE
A FIRST DEGREE IN LESS THAN FOUR YEARS

A candidate for a first degree who has maintained a satisfactory standing in his studies may, with the consent of the Committee on Registration and Attendance, take work in addition to the regular number of hours prescribed in the curriculum of the course which he is pursuing.

A student who at the beginning of his Senior year lacks less than thirty semester hours of completing his course may, with the consent of the Committee on Registration and Attendance, distribute his work over the year.

A student who at the beginning of any semester lacks less than fifteen semester hours of completing his course may, for reasons deemed sufficient by the Committee on Registration and Attendance, be excused from taking more than the necessary number of hours.

A candidate for a first degree, who has credit for the required number of hours of work, including all the required subjects, may, at the end of the semester in which his work is completed, be excused from further attendance at the University, and may receive his degree at the Commencement next following such semester.

For conditions under which graduate work may be pursued during the Senior year, see page 70, "Graduate Study."

CREDIT FOR SUMMER WORK. A candidate for a first degree may receive credit for work done at the summer school of an approved institution of collegiate rank, provided that the work have the approval of the head of the corresponding department in Brown University; but no credit will be given

‡ At least one of these electives counting for three hours through the year must be taken in some department not in the Division of Engineering.

for required courses except those specially designated by the Committee on Registration and Attendance in conference with the departments concerned. The amount of credit given at the institution in question will be given at Brown University, but the total credit for work at a summer school in any one summer shall not exceed six semester hours, except as noted below. Applications must be filed at the Registrar's office before Commencement on blanks provided for the purpose.

A candidate for a first degree may, with the consent of the head of a department and with the approval of the Faculty, pursue studies (except required courses) connected with that department during any summer in which he does not attend a summer school, and may receive credit for such studies, provided that the work be done under the supervision of the head of the department concerned and that the candidate pass an examination in all the work before the beginning of the next academic year. The amount of credit will be determined by the head of the department, but the total credit for any one summer shall not exceed three semester hours, except as noted below. Applications must be approved by the head of the department concerned, and must be filed at the Registrar's office before June 1, on blanks provided for the purpose. A student will not be allowed to do summer work in connection with any department of the University until he has presented to the head of the department a registration card signed by the Registrar.

Students who have no deficiency due to failure and who have an average grade of *B* in all courses to date may receive a maximum credit of nine semester hours for work at a summer school, or a maximum credit of six semester hours for work done under the supervision of a department. Such students will be allowed to continue or supplement work done at a summer school by work done under the supervision of a department in such manner that a summer school credit of two semester hours may be extended in the same subject to three semester hours, two summer school credits of two hours each may be extended in the same subjects to three semester hours each, or a summer school credit of four semester hours in one subject may be extended in the same subject to six semester hours. In no other manner will credit be allowed both for work done at a summer school and for work done under the supervision of a department during the same summer.

ATTENDANCE, STANDING, AND EXAMINATIONS

ATTENDANCE. Every student is required to attend every session of the classes in which he is registered, including gymnasium, and also the daily chapel service.

STANDING. A record is kept of every student's attendance and of his proficiency in his several studies. At the close of each semester a report is sent to the parent or guardian of every undergraduate student containing a record of all his absences from required exercises, and indicating his standing in each of his studies for the semester, including any deficiency. A student who, in any semester, has failed in three or more courses counting for more than eight hours a week, will not be registered again without special action of the Committee on Registration and Attendance.

There are four pass grades: *A*, *B*, *C*, *D*. No student will be allowed to graduate who has not attained a grade above *D* in at least sixty semester hours of college work.

E is assigned to those who have failed to pass; or to those whose work during the semester has been so unsatisfactory that, in the opinion of the instructor, they should not be allowed an examination; or to those who, in a laboratory course, have not completed half the work required.

O is assigned to those who have been absent one-half the time in a course, or to those whose absence from the examination is not excused by the Dean.

A student who receives the mark *E* in a required course must repeat the course; except that in required courses designated by the Committee on Registration and Attendance, in conference with the department concerned, a failure may be made up by work at an approved summer school. A student who receives the mark *E* in an elective course may substitute some other course approved by the Committee on Registration and Attendance, or he may take an equivalent amount of approved summer work.

I is assigned to those whose semester work is incomplete, but satisfactory so far as done. All incomplete work must be made up before the middle of the following semester. If this requirement is not met, the mark will be changed to *E*, unless an extension of time is granted by the Committee on Registration and Attendance.

Abs. is assigned to those who have been absent from examination, unless *E* has already been assigned on the basis of the work during the semester.

A student whose semester work is incomplete and who is absent from the examination is assigned the marks *I* and *Abs.*

EXAMINATIONS. All classes are examined at the close of each semester. A student is not admitted to the examination in a study in which he has received the mark *E* or *O*.

Examinations other than the regular semester examinations are given only to students who have received the mark *Abs.* and whose absences have been excused by the Dean, and to candidates for advanced standing; but candidates for the degree of Bachelor of Science who have failed in a first examination may, at the discretion of the department concerned, be allowed a second examination, subject to the regulations below. Such students must present to the department satisfactory evidence that the work of the course has been thoroughly reviewed.

A student is not admitted to a special examination except on written authorization from the Registrar. If the examination is taken to remove the mark *Abs.* or *E*, the student must pay to the Registrar a fee of two dollars.

Special examinations upon the work of the first semester are given only during the following spring recess. Special examinations upon the work of the second semester are given only in the following September on as many days as may be necessary preceding the opening of the academic year, except that special examinations on the work of the second semester of the Senior year are given on the Saturday and Monday after the examination period in June.

Students desiring special examinations in the spring recess must make application to the Registrar not later than March 1, specifying the subjects in which examinations are desired. On or before March 15 a schedule of special examinations will be posted. Students desiring special examinations in September must make application to the Registrar not later than August 15, specifying the subjects in which examinations are desired. A schedule of the September examinations is sent about September 1 to the students concerned.

Special examinations at times other than those scheduled are allowed only by consent of the Committee on Registration and Attendance.

Special examinations for advanced standing are, so far as possible, arranged at the times assigned for other special examinations.

EXAMINATIONS TO REMOVE ENTRANCE CONDITIONS. Students who enter with conditions in English 1, English 2, Algebra, or Plane Geometry are required to take regular instruction in these subjects during the Freshman year under a tutor approved by the department concerned. A special examination will be given on completion of the work, but in no case before the close of the Christmas recess.

Students who fail to meet the entrance requirements in English or Mathematics before the beginning of the Junior year will not be allowed to register until these deficiencies have been removed.

Freshmen who have entrance conditions in subjects other than English, Algebra, or Plane Geometry may remove the conditions by passing the regular

mid-year entrance examinations. Applications must be filed with the Registrar before January 15, on blanks provided for the purpose. No student who has failed in an entrance examination will be granted a second examination at any time other than September, except on presentation of a tutor's certificate that he is prepared for such examination, and on payment of a fee of two dollars. No entrance examinations other than those appointed above will be held unless ordered by the Committee on Registration and Attendance.

Students who enter with conditions in Language, Science, History, Solid Geometry, Plane Trigonometry, or Advanced Algebra, must remove these conditions, by examination, before the beginning of the Sophomore year; otherwise such conditions will be regarded as deficiencies in college work and the students required to take extra courses in the departments in which the deficiencies occur, the amount and selection of the courses to be determined by the Committee on Registration and Attendance in consultation with the departments.

GRADUATE STUDY

OPPORTUNITY for advanced study in Brown University is open to two classes of students:

(1) Students who have received the bachelor's degree (other than the degree of Bachelor of Education) from Brown University or from some other college whose requirements for the degree are substantially equivalent.

(2) Students in the Senior class in Brown University who have received an average mark of *B* throughout their course, and who require not more than twelve semester hours for the completion of their work for the bachelor's degree.

Subject to conditions stated below, students of these two classes may be enrolled as candidates for advanced degrees, by vote of the Faculty on recommendation of the Dean of the Graduate Department. If not so enrolled, they are designated as special graduate students. An undergraduate candidate for an advanced degree is not permitted to take more than twenty-one hours in a single semester.

Candidates for advanced degrees must be present in person to receive the degree unless excused by the President.

REGISTRATION OF GRADUATE STUDENTS. Not later than the eighth day of the first semester, every candidate for registration as a graduate student must file with the Dean of the Graduate Department, on a blank provided for the purpose, an application designating the courses he desires to take during the ensuing year. This application must be approved by the professor in charge of each course. If not a student or graduate of Brown University, he must file with his application his diploma or other evidence of holding the bachelor's degree, together with a marked catalogue or detailed statement showing the courses he has pursued. On completion of these requirements the Dean will issue a blank authorizing the candidate to register at the Registrar's office in the courses to be taken. This blank, together with a receipt from the Comptroller for the advance payment on the bill for the semester, must be presented to the Registrar before any classes are attended. All graduate students must register at the Registrar's office within three days after the opening of the second semester, and must present a receipt from the Comptroller for the advanced payment. An authorization from the Dean will not be required for the second semester unless a change in courses is to be made. Registration later than the days designated is permitted only on payment of a fee of three dollars.

REQUIREMENTS FOR ADVANCED DEGREES

REQUIREMENTS FOR THE DEGREE OF MASTER OF ARTS. To become a candidate for the degree of Master of Arts, the student must hold

(or, if an undergraduate student, be a candidate for) a bachelor's degree other than a degree given for technical work.

To obtain the degree of Master of Arts, the candidate must complete a year of graduate study of not less than thirty semester hours. The work may be all in one subject, but may not be in more than three, that is, a major subject and one or two minor subjects chosen with the approval of the professor in charge of the major subject. It shall be arranged according to a coherent plan by the professor in charge of the major subject. An essay or report is required in the major subject and a final oral examination may be required at the option of the professor in charge of the major subject. The degree is granted only on the written recommendation of the professor in charge of the major subject.

Graduate Work Done in Other Institutions. Graduate work done in residence in another institution and not used in fulfilment of the requirements for an advanced degree elsewhere may be offered in partial fulfilment of the requirements for the degree of Master of Arts, provided it shall have the approval of the Dean of the Graduate Department and the professors in charge of the student's work; but the equivalent of at least eighteen semester hours must be done in residence at Brown University.

Undergraduate Credit. A graduate of Brown University who has to his credit undergraduate courses in which he has received a grade of *A* or *B*, which have not been counted toward the bachelor's degree, may offer such courses in partial fulfilment of the requirements for the degree of Master of Arts, provided they conform to the requirements for the degree.

Graduate Students in Undergraduate Courses. When a graduate student pursues courses regularly open to undergraduates, only those courses in which the grade of *A* or *B* has been received shall be counted toward the degree.

REQUIREMENTS FOR THE DEGREE OF MASTER OF SCIENCE.

To become a candidate for the degree of Master of Science, the student must have completed, or plan to complete, in addition to his work for the degree, sixty semester hours in mathematics and the sciences.

To obtain the degree of Master of Science, the candidate must complete a year of graduate study of not less than thirty semester hours in mathematics, engineering, physics, chemistry, astronomy, the biological sciences, psychology, or the geological sciences, in addition to the sixty hours, specified above, in mathematics and the sciences. The work may be all in one subject, but may not be in more than three, that is, a major subject and one or two minor subjects chosen with the approval of the professor in charge of the major subject. It must be arranged according to a coherent plan by the professor in charge of the major subject. A report of an investigation or a thesis is required in the major subject and a final oral examination may be required at the option of the professor in charge of the major subject. As a substitute for the report an advanced six-hour laboratory course, extending through the year, may be accepted by

the professor in charge of the major subject. The degree is granted only on the written recommendation of the professor in charge of the major subject.

The provisions in regard to work done in other institutions, undergraduate credit, and grades to be obtained in courses open to undergraduates are the same as for the degree of Master of Arts.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PHILOSOPHY. To become a candidate for the degree of Doctor of Philosophy, the student must choose a major and a minor subject. His course as a whole must be arranged according to a coherent plan by the professor in charge of the major subject and must be approved by the Dean of the Graduate Department. The courses in the minor subject must be approved by the professor in charge of that subject. The full statement of the course, including the subject of the thesis (see below) and the languages in which the student is to be examined (see below), must be filed with the Dean of the Graduate Department not later than October 15 of the last year of candidacy. Candidates who fulfil the requirements stated below are recommended for the degree by vote of the Faculty on recommendation by the Dean of the Graduate Department and the professors in charge of the major and minor subjects.

The candidate must possess a comprehensive knowledge of his major and minor subjects, attested in writing by the professors in charge of those subjects and by a public examination conducted by the Dean of the Graduate Department, the officers of professorial rank in the departments in which the major and minor subjects are taken, and such other members of the Faculty as that body may appoint. This examination will be held not later than June 1 of the last year of candidacy, on a date set by the Dean of the Graduate Department. Application for examination must be made by the candidate to the Dean of the Graduate Department by April 1 of the last year of candidacy.

The candidate must present a thesis on a topic related to his major subject, embodying the results of original research, giving evidence of high scholarship, and constituting a contribution to knowledge. The thesis must have the written approval of the professor in charge of the major subject, and must be presented to the Dean of the Graduate Department in typewritten copy or in print before April 15 of the last year of candidacy. It will be accepted as satisfying the requirements for the degree only when approved by the Faculty and when either the thesis as a whole, or a summary of the essential facts and conclusions which it embodies, has been printed.‡

The candidate must possess a reading knowledge of at least two foreign languages (in addition to any language which may constitute his major subject) sufficient for the purposes of his special studies, such languages to be desig-

‡ In lieu of the thesis or summary in printed form, a summary with a cash deposit, sufficient to cover the expense of printing, may be accepted. If the thesis, or summary, is printed by the author within a year after receiving his degree, and copies thereof are furnished to the University, the deposit will be returned. Otherwise the summary will be printed by the University.

nated by the professor in charge of the major subject. He will be examined in these languages before December 1 in the last year of his candidacy by a committee consisting of the Dean of the Graduate Department, representatives of the departments in charge of the major and minor subjects, and representatives of the language departments concerned. The requirements for this degree being qualitative rather than quantitative, no definite statement of the time required for obtaining the degree can be made, but in no case will the degree be granted for less than two years of graduate work, and the time required will usually be three or four years.

Work Done in Other Institutions. Graduate work done in residence at another institution, prior to enrolment in Brown University, and not used in fulfilment of the requirements for the degree of Doctor of Philosophy elsewhere, may be offered in partial fulfilment of the requirements for the degree, provided it shall have the approval of the Dean of the Graduate Department and the professors in charge of the major and minor subjects, but in no case shall the degree be granted to a candidate who has not completed a continuous year of work (other than work on his thesis) at Brown University.

REQUIREMENTS FOR THE DEGREE OF DOCTOR OF PUBLIC HEALTH. The purpose of the course leading to this degree is to fit students for administrative and research work in connection with the public health service. The general requirements for candidacy and for the granting of the degree are the same as for the degree of Doctor of Philosophy. The major subject must be in the Department of Biology.

THE SCHOOL OF EDUCATION†

THE degree of Bachelor of Education is awarded to two distinct types of students. (A) Graduates of approved normal schools who have had no teaching experience, and who are in residence at the University and in attendance in regular classes. (B) Graduates of approved normal schools who are teachers in service, but who as a rule are not in residence at the University, and are therefore compelled for the most part to extend their work over a period of several years in order to obtain the degree.

The fees for men undergraduates in the School of Education are the same as those for other undergraduates. See pages 168, 169. The fees for women are the same as those for other undergraduate women. All charges for the semester, including room rent, board, and laboratory fees, if any, must be paid in advance at registration for each semester. Candidates for graduation in any year must pay all graduation fees at the beginning of the second semester of that year.

† A special circular, *The School of Education*, may be obtained from the Registrar.

The rules concerning attendance, standing, and examinations (see pages 67-69) apply to undergraduates in the School of Education.

Persons who take the degree of Bachelor of Education in Brown University may obtain the degree of Bachelor of Arts or Bachelor of Philosophy by an additional year's work that satisfies the requirements for the degree chosen, provided that the entrance requirements have been met.

ADMISSION TO CANDIDACY FOR THE DEGREE. Candidates of type (A) must have been graduated from an approved normal school that requires two years of professional and academic study, or must have completed an equivalent preparation, and must satisfy the University's entrance requirements for the degree of Bachelor of Arts or Bachelor of Philosophy, either by presenting an entrance certificate or by passing examinations in the required subjects (see pages 31-51). In addition they must present: (1) an official record of the preparatory school course; (2) an official record of the normal school course; (3) a marked catalogue of the normal school, describing the course of study; (4) a diploma or certificate of graduation from the normal school; and (5) a letter of special recommendation from the principal of the normal school.

Candidates of type (B) must present satisfactory evidence of graduation from an approved normal school, or of the completion of an equivalent preparation, also of at least three years' successful experience as teachers.

The Committee on Registration and Attendance will determine the amount of credit for entrance and advanced subjects to be given to all applicants for admission to the School of Education. Entrance certificates and other credentials should be sent to the Registrar of the University; applications for entrance examinations should be filed with the Registrar on or before August 1, if possible.

ADMISSION OF SPECIAL STUDENTS. Mature persons of good character, who desire to pursue special subjects and who have had the requisite preliminary training, are allowed to enter the various courses of study in the School of Education without becoming candidates for a degree.

Applicants for registration as special students must present to the Registrar of the University (if men), or to the Dean of the Women's College (if women), on or before August 1, if possible, a certified and detailed statement of the nature and extent of their preparatory work, including testimonials of character and ability. If a student has attended more than one institution, credentials must be presented from each of them. Applicants must satisfy the Committee on Registration and Attendance, by passing the entrance examinations or presenting certificates, that they are qualified to pursue the courses desired.

Special students must take fifteen hours of class-room work a week unless satisfactory reasons for a smaller assignment are presented at the time of registration.

ADMISSION OF GRADUATE STUDENTS. Persons who are eligible for admission to the Graduate Department of the University may be admitted to the School of Education as graduate students. Graduate students in the School of Education will be registered also in the Graduate Department of the University, and will be subject to the regulations, conditions, and requirements of that department (see pages 70-73).

REGISTRATION AND ENROLMENT. Before enrolment all students must present to the Director of the School of Education and also to the Registrar of the University or of the Women's College, all necessary credentials. Their course of study must be approved in advance by the Director. The regulations governing the registration and enrolment of students in the other undergraduate departments of the University (see page 54) apply to students in the School of Education. Women students will present themselves for registration and enrolment at the office of the Registrar of the Women's College, in Pembroke Hall.

REQUIREMENTS FOR THE DEGREE. Candidates of type (A) are required to complete a course of fifteen hours of class-room work a week, for each of two years, as follows :

FIRST YEAR.

English 1, 2. Three hours, unless the student is excused on evidence of proficiency in English composition.

Physical or Natural Science, or Mathematics. Three hours.

Two subjects from the following group : *Ancient or Modern Literature; History; Economics, and Social Science or Political Science.* Six hours.

One free elective, or two free electives if the student is excused from English 1, 2. Three hours.

SECOND YEAR.

Education. Three hours.

Philosophy. Three hours.

The subject in the first-year group (*Literature, History, Economics*) not taken in the first year. Three hours.

One elective in continuation of a subject taken in the first year. Three hours.

One free elective. Three hours.

Candidates of type (B) are required to complete sixty semester hours (equivalent to two full years of academic work) with an average grade not lower than C.

Credit may be received for free electives to the maximum of twenty-four semester hours, and a minimum credit of twelve semester hours must be obtained in some single subject or group of closely related subjects. A minimum of four semester hours must be elected from each of the following :

- (1) English Composition unless excused.
- (2) Physical Science or Mathematics.
- (3) Natural Science.
- (4) History.
- (5) Philosophy.
- (6) Education.
- (7) Literature, Ancient or Modern.
- (8) Social or Political Science, or Economics, separately or in combination.

A second course of not less than four semester hours in one of the above named subjects, or group of subjects, must be taken.

A minimum of thirty semester hours must be taken in work offered in regular courses. However, twelve semester hours of this total may be obtained by approved courses taken in other institutions, including courses taken in summer sessions.

The remaining work may be selected from courses offered in University Extension, provided that these courses shall be recommended by the Council of the School of Education and approved for this specific purpose by the Committee on the Curriculum, and provided that before taking such courses the students shall be duly enrolled in the School of Education.

COURSES OF INSTRUCTION

WHEN semester courses are grouped in one paragraph (e.g. Biology 1, 2), they constitute a year course and neither semester may be elected independently unless specific statement to the contrary is made. In starred courses a final mark covering the work of the course as a whole is given at the end of the course, the mark given at the end of the first semester being regarded as temporary. When the time of meeting is not announced, it will be arranged by the instructor at the beginning of the semester.

I. ART

FRANCIS GREENLEAF ALLINSON, PH.D., *David Benedict Professor of Greek Literature and History, Director of the Museum of Fine Arts*

JOHN SHAPLEY, PH.D., † *Assistant Professor of Art*

[11], 12. *General History of Art*

A comprehensive introduction to the subject. Lectures, reading, reports. *Professor SHAPLEY.*

Three hours. Through the year; first semester omitted in 1920-21. Elective for Undergraduates. Either semester may be elected independently. *Mon., Wed., Fri., at 10.25.*

[13. *Greek Sculpture*]

A study of its origin and development. Lectures, reading, reports.

Three hours. First semester. Elective for Seniors and Graduates, and for others who have credit for or are taking 11. Not offered in 1920-21.

14. *Italian Renaissance Painting*

A brief consideration of the principal schools and masters and of the culture on which the art of the time was based. Lectures, reading, reports. *Professor SHAPLEY.*

Three hours. Second semester. Elective for Seniors and Graduates, and for others who have credit for or are taking 12.

15,* 16.* *Freehand Drawing*

Training of hand and eye by study in charcoal and pencil of casts and still-life objects.

† On leave of absence during the first semester 1920-21.

One hour. Two hours of drawing. Through the year. Elective for Undergraduates. Given at the Rhode Island School of Design. Hours to be arranged with the Director of the School of Design.

17,* 18.* *Advanced Drawing*

Three hours. Six hours of drawing, or four hours of drawing and one hour lecture on Historic Ornament. Through the year. Elective for students who have credit for or are taking 11, 12, and who have credit for 15, 16. Given at the Rhode Island School of Design. *Mon., Tu., Wed., at 2.* Lecture hour to be arranged with the Director of the School of Design.

[21], 22. *Art Seminary*

Research work arranged to meet the needs of individual students.
Professor SHAPLEY.

Three to twelve hours. Through the year; first semester omitted in 1920-21. Elective for Graduates and approved Undergraduates.

[23, 24. *Journal Club*]

A study of contemporary investigation and criticism based on current periodicals.

Three hours. Through the year. Elective for Graduates and approved Undergraduates. Not offered in 1920-21.

II. ASTRONOMY

ROLAND GEORGE DWIGHT RICHARDSON, PH.D., *Professor of Pure Mathematics, Acting Director of the Ladd Observatory*

CLINTON HARVEY CURRIER, A.M., *Assistant Professor of Mathematics*

1, 2. *Descriptive Astronomy*

Professor CURRIER.

Three hours. Through the year. Elective for candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who have credit for or are taking Plane Trigonometry. *Mon., Wed., Fri., at 9.25.*

[7, 8. *Advanced Astronomy*]

Three hours. Through the year. Elective for approved students. Not offered in 1920-21.

III. BIBLICAL LITERATURE AND HISTORY ‡§

HENRY THATCHER FOWLER, PH.D., *Professor of Biblical Literature and History*

MARION EMMETT BRATCHER, PH.D., *Lecturer in Biblical Literature and History*

LITERATURE AND HISTORY IN ENGLISH

19. *Introduction to the Study of Biblical Literature*

Intended to cultivate an appreciation of Biblical literature by the reading and study of narratives, addresses, epistles, didactic and lyric poetry, selected from the Old and New Testaments. *Professor FOWLER.*

Three hours. First semester. Elective for students who have credit for a semester's work in English Literature. Fulfills the requirement of a semester course in English Literature, Biblical Literature, Art, or Music. *Tu., Th., Sat., at 10.25.*

28. *Social Teachings of the Prophets and Jesus*

Historical study of the principles underlying the social teachings of the Hebrew prophets and sages, and their interpretation in modern terms; Jesus' conception of the ideal social order, and the means by which it is to be established. *Dr. BRATCHER.*

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 10.25.*

15, 16. *Old Testament Literature and History*

Includes nearly the entire Old Testament literature and history. Emphasis placed upon the connection between the literature and the history. With 17, 18 gives a comprehensive view of Biblical literature and history. The books are read in the best English translations. First semester: Early Semitic history; Hebrew literature and history to the close of the United Kingdom. Second semester: Hebrew and Jewish literature and history from the division of the kingdom to the conquest of Alexander. *Professor FOWLER.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Either semester may be elected independently. *Tu., Th., Sat., at 11.25.*

[17, 18. *New Testament Literature and History*]

Includes a large part of the Jewish writings from the conquest of

‡ For conditions under which students may receive credit in the Newton Theological Institution for work done in this department, see pages 165, 166.

§ For courses for the training of leaders in Religious Education, see pages 150, 151.

Alexander to the destruction of Jerusalem, and the entire New Testament studied in its Jewish setting. Emphasis placed upon the connection between the literature and the history. With 15, 16 gives a comprehensive view of Biblical literature and history. The books are read in the best English translations. First semester: Jewish literature and history from the beginning of the Greek period to the destruction of Jerusalem; the Gospels and other sources for the life of Christ. Second semester: outline of the life of Christ; literature and history of the Apostolic Age.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Either semester may be elected independently. Not offered in 1920-21.

27. The Origin and Growth of the Hebrew Religion

A survey of the history of the Hebrew religion in its relation to primitive Semitic ideas and to the course of Israel's political and social development from the federation of tribes at Sinai to the beginning of the Christian era. Traces the rise and development of the ethical monotheism which lies at the basis of modern Judaism, Mohammedanism, and Christianity. Dr. BRATCHER.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. Tu., Th., Sat., at 10.25.

30. History of Religion

An outline study of the history of the principal religions of the world. This course is the same as Philosophy 30. Professors FOWLER and JONES. Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. Tu., Th., Sat., at 10.25.

21, 22. Biblical Seminary

Subjects for 1920-21: First semester: New Testament interpretations of Jesus. Professor FOWLER. Second semester: the development of clan and tribe in ancient Israel. Professor FOWLER and Mr. KULP.

Three hours. Through the year. Elective for Graduates and approved Seniors. Mon. at 2.

LANGUAGES

1, 2. Elementary Hebrew

Grammar; exercises in writing Hebrew; translation of parts of Genesis. Dr. BRATCHER.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates.
Tu., Th., Sat., at 8.

3, 4. *Historical Hebrew*

Readings from Genesis, Samuel, and Kings with special attention to the acquisition of a vocabulary; review of the elements of Hebrew grammar and study of syntax. *Professor FOWLER.*

Three hours. Through the year. Elective for students who have credit for 1, 2.
Tu., Th., Sat., at 2.

5, 6. *Hebrew Literature*

Critical translation and study of the characteristics and development of some one of the great divisions of Hebrew literature — Psalm, Wisdom, Legal, or Prophetic. Subject for 1920–21: The Development of the Legal Literature. *Professor FOWLER.*

Three hours. Through the year. Elective for students who have credit for 3, 4.

7. *Textual Criticism of the Old Testament*

The principles and method of textual criticism, in connection with the study of one of the shorter prophetic books. *Professor FOWLER.*

Three hours. One semester. Offered if applied for by students who have credit for 3, 4.

9, 10. *Elementary Arabic*

Grammar; exercises in writing Arabic; translation of prose selections. *Professor FOWLER.*

Three hours. Through the year. Elective for Seniors and Graduates.

[11, 12. *Gospels and Epistles*]

First semester: the Gospel and Epistles of John, the Gospel of Mark.
Second semester: the Gospels of Matthew and Luke.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates.
Not offered in 1920–21.

13, 14. *Acts and Pauline Epistles*

Characteristics of Hellenistic Greek; translation, and investigation of date, authorship, and thought. First semester: Acts and Thessalonians. Second semester: Galatians, Corinthians, and Romans. *Professor FOWLER.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates.
Either semester may be elected independently.

23, 24. *Alexandrian Jewish Literature*

Translation from the Septuagint and writings of Philo. *Professor FOWLER.*

Three hours. Through the year. Offered if applied for by students who have an adequate knowledge of Greek.

[25. *Elementary Syriac*]

Readings from the New Testament and from selected Syriac writers with a gradual presentation of the grammar in its simplest form.

Three hours. Through the year. Elective for Graduates. Not offered in 1920-21.

IV. BIOLOGY

ALBERT DAVIS MEAD, PH.D., SC.D., *Professor of Biology*

FREDERIC POOLE GORHAM, A.M., *Professor of Bacteriology*

HERBERT EUGENE WALTER, PH.D., *Associate Professor of Biology*

PHILIP HENRY MITCHELL, PH.D., *Associate Professor of Physiology*

REGINALD GORDON HARRIS, A.M., *Instructor in Biology*

JOHN BURNHAM FERGUSON, A.B., M.D., *Demonstrator in Anatomy*

1, 2. *General Biology*

The structure of animals; elementary vital phenomena; the functions of organs; the development of organisms; the principles upon which modern hygiene and sanitation are based, lectures on personal hygiene and care of the body, the causes, methods of transmission, and prevention of communicable diseases; discussion of the more important biological theories, such as evolution, natural selection, variation, mutation and heredity. The course will introduce the student to the use of the microscope, laboratory technic, and scientific methods of observation and experiment. *Professor GORHAM.*

Three hours. Six hours of attendance. Through the year. 1 is required in the first semester, Freshman or Sophomore year, of candidates for the degree of Bachelor of Philosophy. 2 or Botany 20 is required in the second semester. Elective for Undergraduates. Lectures, *Mon., Th., Fri., at 3.* Laboratory fee, \$4.50 a semester.

3, 4. *Comparative Anatomy of Vertebrates*

The structure and significance of the various organs of vertebrates with particular reference to man, including some consideration of

genetics. Intended not only for general students, but also for those who are particularly interested in zoölogy and for those who expect to study medicine. Students are permitted to attend clinics and autopsies at the Rhode Island Hospital. Laboratory work and lectures. *Professor WALTER.*

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors who have credit for 1, 2. *Mon., Wed., Fri., at 8.* Laboratory fee, \$4.50 a semester.

[5, 6. *Anatomy of the Nervous System*]

A study of the gross and microscopic anatomy of the brain, nerves, and sense organs in man and other vertebrates. Designed particularly for those intending to study medicine or psychology.

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1, 2. By written consent of the department this course may be elected for six hours. Not offered in 1920-21.

7, 8. *Embryology and Histology*

The origin of the individual and the developmental process from the egg to the adult; the material basis of heredity; the composition of the body and its organs in terms of their vital units, the cells. Practice in micro-technic. Adapted to the needs of general students and of those intending to study medicine. *Professor MEAD.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for 1, 2. *Tu., Th., Sat., at 8.* By written consent of the department this course may be elected for six hours. Laboratory fee, \$4.50 a semester.

9, 10. *Advanced Histology and Pathology*

Work in micro-technic and in normal and pathological histology. Adapted to individual needs. *Professor MEAD.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 1, 2, and 7, 8. Laboratory fee, \$4.50 a semester. Not to be offered in 1921-22.

12. *General Physiology*

General vital processes in plants and animals; the more special phenomena in higher animals, with their bearing on human physiology. Designed not only as an introduction to further work, but also as a

general view of physiology. Lectures and laboratory work. *Professor MITCHELL.*

Three hours. Six hours of attendance. First semester. Must be preceded by 1, 2 and Chemistry 1, 2. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Mon., Wed., Fri., at 11.20.* Laboratory fee, \$4.50 a semester.

13, 14. *Chemical Physiology*

The chemistry of proteins, carbohydrates, and fats; the physiology of the digestive system, with the study of secretions and of artificial salivary, gastric, and pancreatic digestions; examination of blood, bile, and urine; the analysis of foods, particularly milk. Designed for those who are interested in physiology either from a medical or a general standpoint, and for those who are specializing in chemistry and desire a knowledge of vital chemical processes. *Professor MITCHELL.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors and Seniors who have credit for or are taking Organic Chemistry 7, 8. *Tu., Th., Sat., at 10.25.* By written consent of the department this course may be elected for six hours. Laboratory fee, \$4.50 a semester.

15. *Invertebrate Zoölogy*

A study of the natural history of invertebrate animals, particularly marine forms, insects, and protozoa. Lectures with laboratory and field work. *Professor WALTER.*

Three hours. Six hours of attendance. First semester. Elective for Undergraduates who have credit for 1, 2. *Tu., Th., Sat., at 8.* Laboratory fee, \$4.50.

46. *Natural History*

A study of animals, including birds during the spring migration, not considered in 15. Lectures with demonstrations and field work. *Professor WALTER.*

Three hours. Six hours of attendance. Second semester. Elective for Undergraduates who have credit for 1, 2. *Tu., Th., Sat., at 8.*

16. *Bacteriology*

A general discussion of bacteria in all their relations, with special attention in the laboratory to the methods of studying bacteria, including the isolation and determination of unknown species. Lectures and laboratory work. *Professor GORHAM.*

Three hours. Six hours of attendance. Second semester. Elective for Juniors and Seniors, and for Sophomores who are not taking any other course in the department. *Mon., Wed., Fri., at 10.25.* Laboratory fee, \$4.50.

17, 18. *Advanced Bacteriology*

Practical work in the qualitative and quantitative biological examination of water, milk, air, soil, and sewage; study of the more common pathogenic organisms, with the determination of their pathogenic properties, and the methods of bacteriological diagnosis of disease. Laboratory work and seminary. *Professor GORHAM.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 16. *Mon., Th., at 4.30.* Laboratory fee, \$4.50 a semester.

27, 28. *Advanced Bacteriology*

A continuation of 17, 18, with special reference to serological diagnosis and immunity. Laboratory work and seminary. *Professor GORHAM.*

Three hours. Six hours of attendance. Through the year. Elective for Seniors and Graduates who have credit for 16 and 17, 18. Laboratory fee, \$4.50 a semester.

22. *Evolution*

The history of biology, principles of classification, geographical distribution, heredity, natural selection, variation, Mendelism, and the relationship of man to the lower animals. Lectures and assigned reading. *Professor MEAD.*

Three hours. Second semester. Elective for Juniors and Seniors. *Tu., Th., Sat., at 11.25.* Not to be offered in 1921-22.

33, 34. *Biological Research*

Research work arranged to meet the needs of individual students. *Professors MEAD and WALTER.*

Three to twelve hours. Through the year. Elective for Graduates.

35, 36. *Advanced Physiology*

General physiology of the cell; fundamental chemical and physico-chemical reactions of life; physiology of the muscular, nervous, and circulating systems; nutrition, chemistry of food, metabolism, dietetics. Laboratory work and seminary. *Professor MITCHELL.*

Three hours. Through the year. Elective for Seniors and Graduates who have sufficient knowledge of chemistry and physiology. Laboratory fee, \$4.50 a semester.

37, 38. *Bacteriological Research*

Research work arranged to meet the needs of individual students. *Professor GORHAM.*

Three to twelve hours. Through the year. Elective for Graduates who have credit for 16 and 17, 18; 27, 28.

39, 40. *Biological Theories and Problems*

Seminary course. *Professor MEAD.*

One to three hours. Through the year. Elective for Graduates.

41, 42. *Zoölogical Seminary*

Reading and discussion of zoölogical literature selected with reference to the needs of individual students. Particularly designed to facilitate sight reading of scientific German. *Professor WALTER.*

One to three hours. Through the year. Elective for Graduates.

43, 44. *Physiological Research*

Research work arranged to meet the needs of individual students. *Professor MITCHELL.*

Three to twelve hours. Through the year. Elective for Graduates.

V. BOTANY

CARROLL WILLIAM DODGE, PH.D., *Assistant Professor of Botany*

WALTER HENRY SNELL, PH.D., *Assistant Professor of Botany*

JAMES FRANKLIN COLLINS, PH.B., *Demonstrator in Botany*

20. *Elementary Botany*

Designed to give a general knowledge of plant life and its relation to human welfare. Laboratory work includes a study of a representative of each of the great groups of plants and a more detailed study of the anatomy and physiology of the seed-producing plants. Lectures and field trips. *Professor SNELL.*

Three hours. Six hours of attendance. Second semester. Botany 20 or Biology 2 is required in the Freshman or Sophomore year of candidates for the degree

of Bachelor of Philosophy. Elective for others by permission. *Mon., Th., Fri., at 3.* Laboratory fee, \$1.50.

1, 2. *General Course*

First semester: The general anatomy of seed plants, followed by an elementary treatment of the physiology of all plant life, and its relation to human welfare. Second semester: A detailed study of representatives of each of the great groups of plants with special attention to the reproductive organs and the evolution of sex; classification and distribution of plants and an elementary treatment of the theories of heredity and evolution. Lectures and field trips. *Professor DODGE.*

Three hours. Six hours of attendance. Through the year. Elective for Undergraduates. *Mon., Wed., at 8.* Laboratory fee, \$1.50 a semester.

[3, 4. *Physiological Anatomy*]

Intended for students who expect to study medicine, agriculture, forestry, or plant pathology, as well as for those who expect to teach or pursue further work in botany. The origin, minute structure, and physiological function of plant tissues; reproduction, cytology; methods in micro-technic. The purpose of this course is to help the student to understand how plants, by the differentiation of cells and their association into tissues adapted to perform different kinds of work, are able to meet the conditions of their environment.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2, or its equivalent. By written consent of the department this course may be elected for six hours. Laboratory fee, \$4.50 a semester for each three hours of credit. Not offered in 1920-21.

5, 6. *Morphology*

A comparative study of forms of plant life, with emphasis upon phylogenetic relationships; gross and minute anatomy, especially of the seed plants; methods in micro-technic. *Professor SNELL.*

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2. Laboratory fee, \$4.50 a semester.

18. *Taxonomy*

Enough morphology will be presented to give an insight into the reasons underlying classifications of plants; the history of botanical

codes of nomenclature and a detailed study of the present International Code; the proper use of herbaria and reference works. A special effort will be made to acquaint the student with the local flora. Field trips. *Professor DODGE.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 1, 2. Laboratory fee, \$1.50.

10. *Trees*

A study of the tree in its economic and esthetic aspects; the structure and functions of trees; kinds and distribution of trees in the United States; identification of trees in and about Providence. Field trips. *Professor SNELL.*

One hour. Two hours of attendance. Second semester. Elective for Undergraduates.

13, 14. *Plant Pathology*

A general morphological survey of myxomycetes, bacteria, and fungi, followed by a study of the diseases of plants caused by these organisms; the economic importance of these diseases; parasitism and saprophytism, relations of parasite and host, methods of control. Field trips. *Professor SNELL.*

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 5, 6 or Biology 16. Laboratory fee, \$4.50 a semester.

11, 12. *Physiology*

Includes a review of the chemistry of colloids, diffusion and surface tension phenomena and ions in their relation to the fundamental properties of the cell; osmotic pressure and permeability; transpiration, mineral nutrients, photosynthesis and carbohydrate metabolism, enzymes and respiration, growth and movements, irritability and the general relations to heat, light, and electricity, and the physiology of reproduction. *Professor DODGE.*

Six hours. Eight hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 18 or 13, 14, or Biology 12 or 13, 14, or Chemistry 53, 54 or its equivalent. A reading knowledge of French or German is very desirable, but not required. Laboratory fee, \$4.50 a semester.

7, 8. *Botanical Research*

Research, including the preparation of a thesis. *Professors DODGE and SNELL.*

Hours and credits to be determined individually. Elective for Graduates and approved Seniors.

15, 16. *Field Botany*

Weekly field trips.

One hour. One afternoon of attendance. Through the year. May be elected for more than one year. Elective for all students taking work in the department who have credit for 1, 2.

21, 22. *Botanical Seminary*

A study of recent botanical literature.

Two hours. Through the year. May be elected for more than one year. Elective for students who have credit for 1, 2.

VI. CHEMISTRY†

ROBERT FOSTER CHAMBERS, PH.D., *Assistant Professor of Chemistry on the Newport Rogers Foundation*

SAMUEL TOMLINSON ARNOLD, PH.D., *Assistant Professor of Chemistry*

HERBERT FRANKLIN DAVISON, A.M., *Assistant Professor of Chemistry*

LUCIUS AURELIUS BIGELOW, PH.D., *Instructor in Chemistry*

FRANCIS LLOYD SIMONS, SC.M., *Instructor in Chemistry*

CARLETON SOUTHWICK SPEAR, SC.M., *Assistant in Chemistry*

LOUIS ARTHUR RAYMOND PIERI, SC.M., *Research Fellow in Chemistry*

RODNEY ESTEN COOK, PH.B., *Assistant in Chemistry*

1, 2. *Descriptive Chemistry*§

Non-metals; metals, their metallurgy, compounds, and practical applications; theoretical chemistry. Lectures with experiments; written exercises; laboratory work. *Professor DAVISON and Mr. SIMONS.*

Three hours. Through the year. Elective for Undergraduates who have not presented chemistry for admission. *Tu., Th., Sat., at 10.25.* Laboratory fee, \$4.50 a semester. Laboratory hours to be arranged with the instructor.

51, 52. *Inorganic Chemistry*§

Professor DAVISON and Mr. SIMONS.

† Courses 1, 2, or 51, 52; 3, 4, 7, 8, and 15, 16 are designed to give a thorough general introduction to chemistry to serve as a foundation for teaching chemistry, or for advanced study in medicine, bacteriology, botany, and chemistry. Course 9 is offered for those who intend to follow sanitary work.

§ Credit for the entrance requirement in chemistry admits only to 51, 52, which may not be taken without previous preparation.

Three hours. Through the year. Elective for Undergraduates who presented chemistry for entrance. *Tu., Th., Sat., at 12.25.* Laboratory fee, \$4.50 a semester. Laboratory hours to be arranged with the instructor.

3, 4. *Qualitative and Quantitative Analysis*

Properties of the metallic elements; their separation from certain of their compounds. The principal non-metals and the acids formed by them; methods of separation and recognition of acids and acid radicals. Quantitative precipitations and separations of the most important elements and compounds; the principles upon which quantitative apparatus is constructed. Laboratory work; recitations in qualitative analysis and in chemical theory; exercises in stoichiometry. *Professor ARNOLD and Mr. SPEAR.*

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2, or 51, 52. *1st division, Tu. at 11.25; 2d division, Fri. at 10.25.* Laboratory fee, \$7.50 a semester.

53. *Qualitative Analysis*†

Similar to Chemistry 3, 4 in scope, but designed primarily to complete the requirements in inorganic chemistry for pre-medical students. *Professor ARNOLD and Mr. SPEAR.*

Six hours. Twelve hours of attendance. First semester. Elective for approved students who do not intend to specialize in chemistry. *Mon., Wed., Fri., at 11.25.* Laboratory fee, \$15.

54. *Organic Chemistry*†

Designed primarily to meet the requirement in organic chemistry for pre-medical students. *Dr. BIGELOW.*

Six hours. Nine hours of attendance. Second semester. Elective for students who have credit for Chemistry 53. *Mon., Wed., Fri., at 11.25.* Laboratory fee, \$7.50.

5, 6. *Quantitative Analysis, Advanced Course*

Acidimetry and alkalimetry; analysis of pure chemical compounds, minerals, ores, slags, alloys, limestone, iron, and steel; analysis of organic compounds; examination of agricultural products; testing of chemicals used in textile establishments; gas analysis, etc. *Professor ARNOLD and Mr. SPEAR.*

† Courses 53 and 54 are designed to meet the requirements for admission to medical school. They will not be accepted as prerequisites for more advanced courses.

Six hours. Twelve hours of attendance. Through the year. Elective for approved Juniors, Seniors, and Graduates who have credit for 3, 4. *Mon. at 10.25.* Laboratory fee, \$7.50 a semester.

7, 8. *Organic Chemistry*

Preparation and analysis of representative organic compounds. Lectures, recitations, and laboratory work. *Professor CHAMBERS and Dr. BIGELOW.*

Six hours. Through the year. Elective for approved Juniors, Seniors, and Graduates who have credit for 3, 4. *Mon., Wed., Fri., at 9.25.* Laboratory fee, \$7.50 a semester.

9. *Sanitary Chemistry*

Qualitative and quantitative examination of air, water, food and food adulterants, flour, bread, milk, butter, etc. Also the analysis of sewage and effluents. Lectures, recitations, and laboratory work. *Professor ARNOLD.*

Three hours. First semester. Elective for approved students who have credit for 1-4 and 7, 8. Laboratory fee, \$7.50.

12. *Organic Dyes*

The chemistry and use of mordants, dyes, etc.

Three hours. Six hours of attendance. Second semester. Elective for approved students. Laboratory fee, \$7.50.

[13, 14. *Industrial Chemistry*]

Lectures and laboratory work.

Three hours. Six hours of attendance. Through the year. Elective for approved Graduates. By written consent of the department this course may be elected for six or nine hours. Laboratory fee, \$7.50 a semester. Not offered in 1920-21.

[15, 16. *Physical Chemistry*]

Lectures and laboratory work.

Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 9.25.* Laboratory fee, \$2.50 a semester. Not offered in 1920-21.

17, 18. *Physical Chemistry, Advanced Course*

Lectures. *Professor ARNOLD.*

Three hours. Through the year. Elective for approved Seniors and Graduates

who have credit for Physics 1, 2 and have credit for or are taking Mathematics 7, 8 or its equivalent.

19, 20. Organic Chemistry, Advanced Course

Lectures. *Professor* CHAMBERS.

Three hours. Through the year. Elective for approved Seniors and Graduates. *Mon., 2 to 4; Fri., 3 to 4.*

21, 22. Organic Preparations, Advanced Course

Professor CHAMBERS and *Dr.* BIGELOW.

Three hours. Through the year. Elective for approved Juniors, Seniors, and Graduates who have credit for 7, 8. By written consent of the department this course may be elected for six or nine hours. Laboratory fee, \$7.50 a semester for each three hours of credit.

23, 24. Inorganic Preparations

Professor DAVISON and *Mr.* SIMONS.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. By written consent of the department this course may be elected for six or nine hours. Laboratory fee, \$7.50 a semester for each three hours of credit.

25, 26. Research Work in Chemistry

Professor CHAMBERS.

Three or more hours. Through the year. Elective for Graduates. Laboratory fee, \$7.50 a semester for each three hours of credit.

32. Industrial Analysis

Analysis of commercial products. Lectures, recitations, and laboratory work. *Professor* ARNOLD.

Three hours. Second semester. Elective for students who have credit for 1-8 and 15, 16. Laboratory fee, \$7.50.

VII. ECONOMICS†

HENRY BRAYTON GARDNER, PH.D., *Eastman Professor of Political Economy*

FLOYD LAMAR VAUGHAN, A.M., *Assistant Professor of Economics*

THEODORE HENRY BROWN, PH.D., *Assistant Professor of Economics*

WILLIAM RODERICK SHERMAN, A.M., *Instructor in Economics*

EVERETT CLAIR BANCROFT, A.B., *Instructor in Economics*

ARTHUR LLOYD PHILBRICK, PH.B., *Lecturer in Economics*

1. *Elementary Economics*

The historical origin, structure, and working of the existing economic system. *Professor GARDNER and other members of the Department.*

Three hours. Offered in both semesters. First semester, *Mon., Wed., Fri., at 9.25, 10.25, 11.25; Tu., Th., Sat., at 10.25, 11.25.* Second semester, *Mon., Wed., Fri., at 12.25.* Students electing this course must designate the semester in which it is to be taken.

2. *Elementary Economics*

The principles which determine the prices of goods, the movement of goods in international trade, and the distribution of the national income. *Professor GARDNER and other members of the Department.*

Three hours. Second semester. Required in Sophomore or Junior year of students who intend to take advanced work in Economics. *Mon., Wed., Fri., at 9.25, 10.25, 11.25; Tu., Th., Sat., at 10.25, 11.25.*

The following courses are open only to those students who have credit for Economics 1 and Social and Political Science 1. For members of the class of 1923 and subsequent classes they will be open only to those students who have credit for Economics 1, 2.

3, 4. *Industrial Management*

The organization and management of industrial enterprises, includ-

† Candidates for the degree of Bachelor of Arts or Bachelor of Philosophy are required to take in the Sophomore or Junior year a year course in the departments of Economics and Social and Political Science. This requirement may be met by Economics 1, 2; or Social Science 1, 2; or Political Science 1, 2; or a semester course in each of any two of these subjects.

Candidates for the degree of Bachelor of Science are required to take in the Sophomore year Economics 1, and either Political Science 1 or Social Science 1.

Attention is called to related courses in the following departments: Geology 6, Principles of Economic Geography; Mathematics 53, Mathematical Theory of Investment; Mathematics 54, Mathematical Theory of Statistics; Political Science 7, Jurisprudence and Business Law; Political Science 11, Corporation Law.

ing location and layout of industrial plants, principles of organization, control of production, stores systems, cost keeping, wage systems, and employment problems. Lectures, assigned reading, inspection trips, and reports. *Professor HALL of the Division of Engineering and Mr. BANCROFT.*

Three hours. Through the year. *Tu., Th., Sat., at 10.25.* Elective for Seniors and Graduate Students.

5, 6. *Money and Banking*

Principles of money; recent monetary history, particularly of the United States; systems of leading industrial nations; present problems. Principles of banking; recent banking history, particularly of the United States; the Federal Reserve system; systems of the leading industrial nations; present problems. *Professor GARDNER.*

Three hours. Through the year. *Tu., Th., Sat., at 11.25.*

7. *Problems of Labor and Industry*

An analysis of the economic and social effects of modern methods of production; the rise of the trade union and the influence of collective bargaining; profit sharing, legal minimum wage, social insurance, and other modern movements to secure industrial efficiency and a more equitable distribution of wealth. *Mr. SHERMAN.*

Three hours. First semester. *Mon., Wed., Fri., at 11.25.*

8. *Socialism and Allied Movements*

Criticism of the present industrial order; brief review of the historically important socialistic schemes; an analysis and criticism of the leading socialistic theories with special reference to present day proposals; communism, syndicalism, and land nationalization as agencies for economic reform. *Mr. SHERMAN*

Three hours. Second semester. *Mon., Wed., Fri., at 11.25.*

11, 12. *Public Finance and Financial History*

General principles of public finance; revenues and expenditures of leading industrial nations; public enterprises in their financial aspects; principal forms of taxation and their effects; public debts. Special attention will be given to the financial history of the United States from the adoption of the Constitution to the present day. *Professor GARDNER.*

Three hours. Through the year. *Tu., Th., Sat., at 12.25.*

13. *Statistics* ‡

The principles of statistics as a method of recording and presenting social and economic facts; the possibilities and limitations of the statistical method; the interpretation of statistics; some of the important results of statistical investigation. *Professors GARDNER and BROWN.*

Three hours. First semester. *Mon., Fri., 2 to 5.*

14. *Foreign Trade and Transportation*

Study of world markets; policies and methods used in foreign trade; technic of exporting and importing; development of the ocean carrier; trade routes; ocean transportation of freight, passengers, and mail; government influence on ocean commerce and transportation. *Professor BROWN.*

Three hours. First semester. *Mon., Wed., Fri., at 9.25.*

15. *Trade and Transportation in the United States*

General history of the development of the means of transportation with special reference to the geographical distribution of industries; the organization of transportation service; theory of rates and rate-making; public regulation and control; recent legislation. *Professor VAUGHAN.*

Three hours. Second semester. *Mon., Wed., Fri., at 9.25.*

16. *Corporations and Corporation Finance*

The corporation as a form of business organization; kinds of securities; capitalization, promotion, underwriting, stock market, financial management, and reorganization. *Professor VAUGHAN.*

Three hours. First semester. *Mon., Wed., Fri., at 10.25.*

17, 18. *Accounting*

The importance of accounting in commerce and industry; the principles of recording business transactions and values as applied to firms, private and public service corporations, and fiduciaries; cost accounts and the interpretation of financial statements. *Mr. PHILBRICK.*

Three hours. Through the year. *Mon., Wed., Fri., at 8.*

‡ The Department of Mathematics offers a course (54) in the mathematical theory of statistics in the second semester.

19, 20. *Accounting*

A continuation of 17, 18, involving a study of the practical application of accounts, the reading of balance sheets, analysis of corporation reports, and preparation of financial statements based on books of account. The specialties of the subject, such as costs, auditing, fiduciary accounts, municipal and railroad accounts, will also be studied. *Mr. PHILBRICK.*

Three hours. Through the year. *Tu., Th., Sat., at 8.*

24. *Investments*

Savings accounts in banks; real estate mortgages; government bonds, corporation stocks and bonds; analysis of corporation reports; types of securities for various classes of individuals. *Professor BROWN.*

Three hours. Second semester. *Mon., Wed., Fri., at 10.25.*

25, 26. *Marketing*

First semester: Organization and functions of middlemen; direct and indirect distribution; marketing of the principal raw materials, including a study of the grain and produce exchanges. Second semester: Marketing of manufactured products; methods employed, price policies, coöperation, etc.; buying and selling problems of jobbers and retailers; advertising and related topics. *Professor VAUGHAN.*

Three hours. Through the year. *Tu., Th., Sat., at 9.25.* 25 may be elected independently, but is a prerequisite for 26.

VIII. EDUCATION ‡

WALTER BALLOU JACOBS, A.M., *Professor of Education, Director of University Extension*

STEPHEN SHELDON COLVIN, PH.D., *Professor of Educational Psychology, Director of the School of Education*

CLAUS EMANUEL EKSTROM, A.M., *Instructor in Education*

2. *Principles of Education, an Introductory Course*

The meaning and scope of education; its function as a social institution; a comprehensive view of the problems of education as they appear to-day and an evaluation of the solutions offered. *Professor JACOBS.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 11.25.*

4. *Methods of Teaching*

Organized observation of teaching; lesson-planning; the art of questioning; the use of books in teaching; teaching how to study, how to acquire skill, how to think, how to acquire capacity for enjoyment, how to retain what has been learned; management of classes; measuring the results of teaching; qualities which make the successful teacher. *Professor JACOBS.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 11.25.*

3. *Educational Psychology*

A study of the inherited nature of man, the general principles of learning, the psychology of individual differences, and mental tests and measurements. *Mr. EKSTROM.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.25.*

1. *History of Education*

A study of the historic foundations of modern education, elementary, secondary, and higher; the relation between education and other

‡ Those who intend to teach are advised to elect courses 2 and 4 during the Junior year.

Courses 1-4 cover the usual requirements for professional certificates except where practice teaching or experience is demanded. In Rhode Island a certificate is required of all teachers in schools supported in whole or in part by public money. Professional certificates are granted without further examination to those who have completed courses 1-4 and 21, and hold a college degree. Due credit toward the certificate is also given for separate courses.

phases of historical development; present problems in the light of past experience. *Mr. EKSTROM.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 12.25.*

21. *Administration of Education, National and State*

A study of education as an institution of society and the state; Rhode Island as a type; a survey of all educational activities as they exist at the present time, private, parochial, and public; their origins in social movements; their mode of administration, particularly the administration of public education as embodied in the laws of the state and nation. The origin, history, and function of Brown University will have an important place. The course covers the state requirement in "Rhode Island Education." *Professor JACOBS.*

Three hours. First semester. Two hours of attendance. Elective for Graduates, approved Seniors, experienced teachers, and administrative officers. *Mon., 4 to 6.*

22. *Administration of Education: Local School Control*

Organization and function of boards of education; the superintendent of schools. Types of schools and their organization: types of grading. The teaching force: training, appointment, promotion, salaries, pensions. The pupil: attendance, promotion, retardation, elimination. The course of study. The measurement of educational results: by marks, by comparisons, by standards and scales. The cost of education: sources of revenue, apportionment of funds. *Professor JACOBS.*

Three hours. Two hours of attendance. Second semester. Elective for Graduates, approved Seniors, experienced teachers, and administrative officers. *Mon., 4 to 6.*

5. *Secondary Education: Organization and Function*

The place of the high school and academy in the American system of education; the administration of secondary education; its relation to the colleges and universities; meaning and value of the various secondary school studies, and their organization into a curriculum; the social life of the high school and academy; athletics in secondary schools; the reorganization of secondary education; the junior high school. *Professor JACOBS.*

Three hours. Two hours of attendance. First semester. Elective for Graduates, approved Seniors, and experienced teachers. *Wed., 3.30 to 5.30.*

6. *Secondary Education : Methods and Processes*

Methods of teaching in secondary schools; the resources at the command of the teacher; the selection of subject-matter. The following receive special attention as typical secondary school studies: English, Modern Languages, and Latin; History and Civics, Science, and Mathematics; the Manual Arts; Vocational Studies. *Professor JACOBS.* Three hours. Two hours of attendance. Second semester. Elective for Graduates, approved Seniors, and experienced teachers. *Wed., 3.20 to 5.20.*

7, 8. *Problems in Practical Teaching, Secondary Schools*

Practice teaching in the high schools of Providence and of neighboring cities and towns. Observation, reports, and conferences. Designed for those who wish to become instructors in colleges, teachers or principals in secondary schools, or superintendents of schools. The course is given with the assistance of Supervising Teachers. *Mr. EKSTROM.* Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and are taking 5, 6, and 15, 16. *Sat. at 9,* and at other hours to be arranged.

9, 10. *Problems in Practical Teaching, Grammar Grades*

Practice teaching in the Providence Grammar Schools. Observation, reports, and conferences. Designed especially for those who wish to become grade teachers, principals of grammar schools, or superintendents of schools, but also for those who wish to teach in secondary schools. The following studies receive special attention: Arithmetic, Language, History, and Geography. The course is given with the assistance of Supervising Teachers. *Mr. EKSTROM.*

Three hours. Through the year. Elective for Graduates who have credit for elementary courses in Education and are taking 15, 16, and for approved Seniors. *Mon. at 3,* and at other hours to be arranged.

11, 12. *Experimental Education*

A course in educational psychology designed to meet the needs of students who have already some familiarity with general psychology and with elementary educational psychology. Particular emphasis will be placed on the psychology of learning, and on mental tests and measurements. Under guidance the student will undertake simple investigations in some phase of experimental education, report on his results, and finally set them forth in written form. *Professor COLVIN.* Three hours. Through the year. Elective for Graduates and experienced teachers. *Th., 4 to 6.*

15, 16. *Seminary in Education*

Studies in current educational problems. The seminary is conducted in two parts in successive hours. Part A: reviews of the latest books upon education and related subjects, and studies of special problems assigned to individual students for investigation and experiment. Part B: a more intensive study of certain problems of current interest. For 1920-21 the subjects are: First semester: Democracy and Education. Second semester: Recent Educational Theory. As subjects are not repeated, the course may be elected for two or more years. *Professor JACOBS.*

Three hours. Two hours of attendance. Through the year. Required of student-teachers. Elective for Graduates, approved Seniors, and experienced teachers. *Sat., 10.25 to 12.25.*

19, 20. *Experimental Education, Research Course*

Designed for those engaged in investigation of major problems in educational psychology. *Professor COLVIN.*

Three hours. Through the year. Attendance by appointment. Elective for Graduates who have credit for 11, 12.

23. *Tests and Measurements*

A general survey of exact measurement in education with practical training in the giving and scoring of standard tests; evaluation of existing tests and scales; how tests and scales are derived; intelligence tests; educational statistics. *Mr. EKSTROM.*

Three hours. Two hours of attendance. First semester. Elective for Graduates, experienced teachers, and administrative officers. *Th., 4 to 6.*

24. *The Junior High School*

A study of the junior high school; the causes and the extent of its development; aims and functions; organization and administration; curricula and courses of study; provisions for individual differences; its future. *Mr. EKSTROM.*

Three hours. Two hours of attendance. Second semester. Elective for Graduates, experienced teachers, and administrative officers. *Fri., 4 to 6.*

IX. ENGINEERING

JOHN EDWARD HILL, C.E.M., Sc.D., *Professor of Civil Engineering*

WILLIAM HERBERT KENERSON, M.E., A.M., Sc.D., *Professor of Mechanical Engineering, Chairman of the Division of Engineering*

ARTHUR EUGENE WATSON, Ph.D., *Associate Professor of Electrical Engineering*

JAMES ALEXANDER HALL, A.B., Sc.B., *Associate Professor of Mechanical Engineering*

SYDNEY WILMOT, Sc.B., A.M., *Assistant Professor of Civil Engineering*

FREDERICK NEAL TOMPKINS, Sc.B., *Instructor in Electrical Engineering*

ALTON CHARLES CHICK, Sc.B., *Instructor in Mechanical Engineering*

EUGENE WILLIAM O'BRIEN, Sc.B., *Instructor in Mechanics and Mechanical Drawing*

ALBERT BULLOCK COOP, Sc.B., *Instructor in Engineering*

CHARLES FRANCIS CHASE, *Assistant in Surveying*

ARTHUR JEREMIAH LATHAM, Sc.B., *Assistant in Surveying*

1. *Elements of Engineering—Surveying*

Theory and practice of plane surveying: use of the tape, compass, level, and transit. *Professor HILL and Messrs. CHASE and LATHAM.*

Three hours. Six hours of attendance. First semester: Lectures, recitations, field work, and drafting. Elective for students who are taking or have taken trigonometry. Recitations: *Division (a), Tu., Fri., at 9.25; Division (b), Mon., Wed., at 9.25; Division (c), Th., Sat., at 9.25.* Field Work: *Division (1), Mon., 8 to 11; Division (2), Fri., 8 to 11; Division (3), Mon., 2 to 5; Division (4), Fri., 2 to 5.*

2. *Elements of Engineering—Mechanics*

Statics, including resolution and composition of forces, centre of gravity, friction, kinetics through rectilinear motion and rotation; work, power, and energy. *Professors HALL and HILL, Mr. O'BRIEN.*

Three hours. Six hours of attendance. Second semester: Lectures, recitations, drafting, and laboratory work. Elective for students who have credit for trigonometry. *Mon., Wed., Fri., at 9.25; Mon., Fri., at 8.*

3. *Engineering Drawing*

Use of drafting instruments, lettering, tracing, third quadrant projec-

tion, detailing and dimensioning of machine parts. *Messrs. O'BRIEN and COOP.*

Three hours. Six hours of drawing and one hour of recitation. First semester. Drafting-room work and assigned reading. Elective for Undergraduates. *1st division, Mon., 8 to 11.15, Th., 2 to 5; 2d division, Fri., 8 to 11.15, Tu., 3 to 6.*

5, 5 a, 5 b. *Surveying*

A continuation of 1. Use of the tape, level, transit, stadia, and plane table; triangulation, topography, and railroad curves. *Professor WILMOT and assistants.*

Ten days during the summer and one hour a week during the year. Credit, three semester hours. Lectures, recitations, field work, and drafting. Elective for students who have credit for 1.

6, 6 a, 6 b. *Mechanical Technology*

Shop work and inspection trips. *Professor HALL, Messrs. CHICK and O'BRIEN.*

Ten days during the summer and one hour per week during the year. Credit, three semester hours.

7, 8. *Applied Mechanics*

A continuation of 2. Completion of statics; moment of inertia; curvilinear motion; combined rotation and translation; impulse and momentum. Strength of materials, including tension, compression, shearing, torsion, and flexure; theory of beams. *Professors HALL and WILMOT, Mr. O'BRIEN.*

Three hours. Through the year. Elective for students who have credit for 2 and who have credit for or are taking Calculus. *Tu., Th., Sat., at 9.25.*

9, 10. *Theory of Structures*

The fundamental course in civil engineering required of all engineering students. Underlying principles in structural design as applied to steel frame buildings and bridges, reinforced concrete in its simpler forms, masonry and timber. Interpretation of drawings. While the work is primarily theoretical, endeavor is made to emphasize practice and its relation to theory for both substructure and superstructure. *Professor WILMOT.*

Three hours. Through the year. Elective for students who have credit for 7, 8. *Mon., Wed., Fri., at 8.*

11, 12. *Elementary Electrical Engineering*

The fundamental course in electrical engineering required of all engineering students. Principles of electricity and magnetism as applied to dynamo-electric machinery. Methods of generating and utilizing direct and alternating currents. Characteristics of generators and motors. *Professor WATSON and Mr. TOMPKINS.*

Three hours. Two hours of recitation and lectures, and two hours of laboratory practice. Through the year. Elective for those who have credit for Physics 1, 2 and Mathematics 6. *Tu., Th., Sat., at 11.25.*

13, 14. *Heat and Power*

The fundamental course in mechanical engineering required of all engineering students; application of the principles of gases and vapors to steam, gas, and other heat engines, air compressors, refrigerating apparatus, etc.; the energy of fuel and its utilization for development of power; combination of units into the power plant. *Professor KENERSON and Mr. CHICK.*

Three hours. Lectures, recitations, and laboratory work. Through the year. Elective for Juniors and Seniors. *Mon., Wed., Fri., at 9.25.*

15. *Materials of Engineering*

Study of the properties of the various materials used in engineering, such as cast iron, steel, bronzes, wood, cement, concrete, brick, and stone. *Professor KENERSON and Mr. CHICK.*

Three hours. Lectures, recitations, and laboratory work. Second semester. Elective for Juniors and Seniors. *Tu., Th., Sat., at 9.25.*

16. *Hydraulics*

Hydrostatics; nature and use of instruments, flow through orifices, over weirs, through tubes, through pipes, in conduits; flow of rivers, dynamics of water; theoretical consideration of water wheels, and pumping machinery. *Professor WILMOT and Mr. CHICK.*

Three hours. Lectures, recitations, and laboratory work. First semester. Elective for students who have credit for 7. *Tu., Th., Sat., at 9.25.*

17, 18. *Engineering Economics*

Accounting, contracts and contracting, patents, specifications, principles of industrial organization and management, compensation of labor, and kindred topics. *Mr. BANCROFT and —.*

Three hours. Not elective. *Tu., Th., Sat., at 9.25.*

19, 20. *Report of Special Investigations*

Professors HILL, KENERSON, and WATSON.

One hour. Through the year. Hours to be arranged. Required of all Seniors in engineering.

A. CIVIL ENGINEERING**27, 28. *Structural Design***

Theory applied to design in steel and reinforced concrete. Individual illustrative problems assigned, drawings prepared, and the results discussed. *Professor WILMOT.*

Three hours. Six hours of drafting. Elective for students who have credit for or are taking Civil Engineering 29, 30. *Mon., Th., 2 to 5.*

29, 30. *Advanced Structures*

An extension of Engineering 9, 10 for those who desire more complete knowledge of the principles governing the design and construction of foundations, building bridges, dams, arches, etc. Problems, lectures, investigations, reports, and recitations. *Professor WILMOT.*

Three hours. Through the year. Elective for students who have credit for Engineering 9, 10 and are taking Civil Engineering 27, 28. *Mon., Wed., Fri., at 9.25.*

31, 32. *Highway Engineering*

Economics, construction and design of roads and pavements. Methods of testing road materials. Systems of administration and maintenance. *Professor WILMOT.*

Three hours. Through the year. Elective for students who have credit for 5, 7, 8. *Tu., Th., Sat., at 10.25.*

33, 34. *Hydraulic and Sanitary Engineering*

Water supply and sewerage from a sanitary and an engineering standpoint. The first semester is devoted mainly to the chemical, biological, and meteorologic aspects of the subject, and the second semester to engineering construction and design. Inspection trips. *Professor HILL.*

Three hours. Through the year. Elective for students who have credit for 10. *Tu., Th., Sat., at 11.25.*

35, 36. *Railroad Engineering*

Theory, location, construction, and economics of railroad engineering. *Professor HILL.*

Three hours. Through the year. Lectures, recitations, field work, and drafting. Elective for students who have credit for 5, 7, 8. *Mon., Wed., Fri., at 11.25.* Field work to be arranged.

B. ELECTRICAL ENGINEERING

51. *Telegraph and Telephone Engineering*

Descriptive course in wire telegraph and telephone apparatus and systems, including laboratory practice in assembling and operating illustrative apparatus. *Professor WATSON and Mr. TOMPKINS.*

Three hours. Two hours of recitation and two hours of laboratory work or trips of inspection. First semester. Elective for students who have credit for or are taking 11. *Mon., Wed., Fri., at 10.25.*

52. *Direct Current Machine Design*

Calculation and design of generators, motors, and auxiliary apparatus, accompanied with assignments of reading in the history and development of dynamo-electric machines. *Mr. TOMPKINS.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 11. *Mon., Wed., Fri., at 10.25.*

53. *Theory of Alternating Currents*

A mathematical and graphical treatment of circuits containing resistance, inductance, and capacity. The measurement of power and power factor in alternating current circuits. Principles of alternating current machinery. *Professor WATSON and Mr. TOMPKINS.*

Three hours. Two hours of recitation and two hours of laboratory work. First semester. Elective for students who have credit for 12 and Mathematics 20. *Tu., Th., Sat., at 10.25.* Laboratory fee, \$2.50.

54. *Alternating Current Apparatus and Systems*

Methods of generating and utilizing alternating currents; characteristics of generators, motors, converters, and transformers. *Professor WATSON and Mr. TOMPKINS.*

Three hours. Two hours of recitation and two hours of laboratory work. Second semester. Elective for students who have credit for 12. *Tu., Th., Sat., at 10.25.* Laboratory fee, \$2.50.

56. Alternating Current Machine Design

Calculation and design of generators, motors, transformers, and auxiliary apparatus. *Mr. TOMPKINS.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 12. Hours to be arranged.

58. Electric Traction and Transmission Engineering

Electric railway apparatus, central and substation equipments for general service; high tension transmission lines and low tension networks. Construction, operation, and related problems. *Professor WATSON.*

Two hours. Second semester. Elective for students who have credit for 11. *Mon., Wed., at 9.25.*

[60. Commercial Metering and Measurements]

A technical course intended to give advanced or special students more detailed study and practice with a considerable range of electrical measuring instruments, including their calibration, with reference to either primary or secondary standards.

Two hours. Second semester. One hour of lecture or recitation, assignments of reading to count for one hour, and one hour of laboratory practice. Not offered in 1920-21.

[63. Electric Power Plant Engineering]

The design, construction, operation, and apparatus of modern electric power stations.

Two hours. First semester. Elective for students who have credit for 12. Not offered in 1920-21.

65, 66. Seminary in Electrical Engineering

Reading and discussion of current technical literature.

One hour. Through the year. Elective for students who have credit for 12. *Fri. at 9.25.*

C. MECHANICAL ENGINEERING

75, 76. Mechanism and Machine Design

Velocity analysis, linkages, intermittent motion, cams, gear tooth curves, gear trains, joints and connections, journals, bearings, power

transmission, machine frames, etc. Lectures, recitations, problems, and drafting-room work. *Professor HALL and Mr. CHICK.*

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 7, 8. *Mon., Wed., Fri., at 11.25; Tu., 2 to 5.*

77. *Internal Combustion Engines*

Application of the principles of thermodynamics and mechanics to the design of internal combustion engines; special emphasis placed on governing and balancing of moving parts. Lectures, problems, laboratory and drafting-room work. *Professor HALL and Mr. COOP.*

Three hours. Six hours of attendance. First semester. Elective for students who have credit for 13, 14 and 75, 76. *Wed., Fri., at 10.25; Tu., 2 to 5.*

78. *Advanced Machine Design*

Application of the principles of the fundamental courses to advanced problems in design, such as centrifugal machinery, etc. Lectures, problems, and drafting-room work. *Professor HALL.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 75, 76. *Wed., Fri., at 10.25; Tu., 2 to 5.*

79, 80. *Power Plant Engineering*

Study of boilers, engines, turbines, condensers, pumps, etc., together with the proper combination of these units to make an efficient power plant. Lectures, problems, laboratory exercises, and inspection trips. *Mr. COOP.*

Three hours. Through the year. Elective for students who have credit for 13, 14. *Tu., Th., Sat., at 11.25; Fri., 2 to 5.*

81. *Mechanical Engineering Practice*

Heating and ventilation, refrigeration, fire prevention, safety engineering, and illumination. Lectures, conferences, and laboratory exercises. *Professor KENERSON and Mr. CHICK.*

Three hours. First semester. Elective for students who have credit for 13, 14. *Mon., Th., 2 to 4.*

82. *Experimental Engineering*

Special problems in the mechanical engineering laboratory; emphasis placed on the form of reports. *Professor KENERSON and Mr. CHICK.*

Three hours. Six hours of attendance. Second semester. Elective for students who have credit for 13, 14.

84. *Industrial Management*

Discussion of the various principles of industrial management as applied to shops and factories. Lectures, reports, and inspection trips.
Professor HALL.

Three hours. Second semester. *Tu., Th., Sat., at 10.25.*

X. ENGLISH ‡

WALTER COCHRANE BRONSON, A.M., LITT.D., *Professor of English*

LINDSAY TODD DAMON, A.B., *Professor of English*

ALBERT KNIGHT POTTER, A.M., *Professor of English*

GEORGE WYLLYS BENEDICT, PH.D., *Associate Professor of English*

THOMAS CROSBY, JR., A.M., *Associate Professor of English and Public Speaking*

HENRY BARRETT HUNTINGTON, A.B., *Associate Professor of English*

WILLIAM THOMSON HASTINGS, A.M., *Assistant Professor of English*

KENNETH OLIVER MASON, A.M., *Instructor in English*

RAYMOND ABNER PRESTON, A.M., *Instructor in English*

BENJAMIN CROCKER CLOUGH, A.M., *Instructor in English*

HOWARD FRANKLIN SHAWCROSS, PH.B., *Assistant in English*

JOSEPH BUTTERWORTH, JR., A.B., *Assistant in English*

MERRILL KELLY BENNETT, PH.B., *Assistant in English*

BENJAMIN WILLIAMS BROWN, A.B., *Assistant in English*

1. *Rhetoric and Composition*

Designed primarily to teach clear and correct expression. Training in the fundamentals of prose composition. Lectures, recitations, and themes. *Professors BENEDICT and HASTINGS, Messrs. MASON, PRESTON, and CLOUGH.*

Three hours. First semester. Required of Freshmen. *1st, 2d, and 3d divisions, Mon., Wed., Fri., at 11.25; 4th, 5th, and 6th divisions, Tu., Th., Sat., at 11.25; 7th, 8th, and 9th divisions, Mon., Wed., Fri., at 12.25.*

‡ Credit for 1 or 2 is a prerequisite for admission to all other courses in the department except 48 and 50.

Students electing 3, 4 may substitute 3 for 2 if they have received at least the grade of C in 1. Students taking 7, 8 in the Sophomore year may omit 2 and take 3 in the Junior year, if they have received at least the grade of C in 1.

Courses 1-16 may not be counted in fulfillment of the requirement of a semester in English Literature.

1 R. *Rhetoric and Composition*

A repetition of 1. Lectures, recitations, and themes. *Mr. MASON.*

Three hours. Second semester. Required of students who have failed in 1. *Tu., Th., Sat., at 12.25.*

48. *English Literature from the Beginning to 1700* ‡

An outline course in the history of English literature to the end of the seventeenth century, with reading and study of the greater writers.

Professors BROWN and DAMON, Mr. PRESTON.

Three hours. Second semester. *1st division, Mon., Wed., Fri., at 11.25; 2d division, Tu., Th., Sat., at 11.25; 3d division, Mon., Wed., Fri., at 12.25.*

50. *Introduction to the Study of Literature* ‡

Intended to cultivate the appreciation of literature by the reading and study of famous essays, novels, plays, and poems. *Professors POTTER and BENEDICT.*

Three hours. Second semester. *1st division, Mon., Wed., Fri., at 11.25; 2d division, Tu., Th., Sat., at 11.25.*

2. *Rhetoric and Composition* §

A continuation of 1. Designed primarily to give training in the method, structure, and style of the chief forms of prose composition.

Lectures, recitations, and themes. *Professors BENEDICT and HASTINGS, Messrs. MASON, PRESTON, and CLOUGH.*

Three hours. Second semester. Required in the Sophomore year of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who have not obtained a grade of *B* in 1. § *1st, 2d, and 3d divisions, Mon., Wed., Fri., at 11.25; 4th and 5th divisions, Tu., Th., Sat., at 11.25; 6th and 7th divisions, Mon., Wed., Fri., at 12.25.*

3,* 4.* *English Composition, Second Course*

Intended to supplement the training given in 1, 2 and to develop the power of exact and lucid statement. Lectures, conferences, and prescribed reading; weekly themes, affording exercise in various plainer kinds of prose writing. *Mr. MASON.*

‡ Freshmen are required to take either 48 or 50. Those who have had a high-school course in the history of English Literature, with reading in the principal authors, are advised to take 50; others are advised to take 48.

§ Candidates for the degree of Bachelor of Science who intend to take an approved substitute for English in the Sophomore year must take 2 in the Freshman year in place of 48 or 50. See page 62.

Three hours. Through the year. Elective for Sophomores and Juniors. *Mon., Wed., Fri., at 10.25.* Not to be offered in 1921-22.

5, 6. *English Composition, Advanced Course*

Intended to develop ease of style and clarity and vigor of thought. Frequent practice in composition and criticism. *Mr. CLOUGH.*

Three hours. Through the year. Elective for a limited number of Juniors and Seniors. With the consent of the instructor the course may be repeated. *Tu., Th., Sat., at 12.25.*

7, 8. *Argumentative Composition*

Intended to develop the power of handling argumentative topics cogently and persuasively. Lectures on the principles and forms of argumentative composition; frequent practice in brief-drawing and the writing of forensics and less formal arguments. *Professors HUNTINGTON and HASTINGS.*

Three hours. Through the year. Required in the Sophomore year of candidates for the degree of Bachelor of Philosophy who have not taken mathematics in the Freshman year. Elective for Sophomores, Juniors, and Seniors. *1st division, Tu., Th., Sat., at 10.25; 2d division, Mon., Wed., Fri., at 10.25.*

10. *Debate*

Intended to train students in correct and vigorous oral presentation of ideas. *Professor HUNTINGTON, with the coöperation of the Professors of Economics, Social and Political Science, History, and Public Speaking.*

Three hours. Second semester. Elective for a limited number of Juniors and Seniors who have credit for 7. With the consent of the instructor the course may be repeated. *Tu., Th., 2 to 4.*

11, 12. *Public Speaking*

Principles of voice culture; vocal interpretation of literature; extempore speaking. First semester, *Professor CROSBY*; second semester, —.

Three hours. Through the year. Elective for Sophomores and Juniors. Not elective for Seniors. *Mon., Wed., Fri., at 11.25.*

[13, 14. *Public Speaking, Advanced Course*]

Practice in reading lyric, narrative, and dramatic literature, in extempore speaking, and in the composition and delivery of the common forms of the occasional address. Special attention given to securing right tone-production and to improvement in speech.

Three hours. Through the year. Elective for students who have received the grade of *A* or *B* in 11, 12. Not offered in 1920-21.

49. *English Literature from 1700 to 1900*

An outline course in the history of English literature of the eighteenth and nineteenth centuries, with reading and study of the greater writers. *Professors* BRONSON, DAMON, POTTER, and HUNTINGTON.

Three hours. First semester. Elective for Sophomores. *1st and 4th divisions, Mon., Wed., Fri., at 11.25; 2d division, Tu., Th., Sat., at 11.25; 3d division, Mon., Wed., Fri., at 12.25.*

47. *Great Story-Tellers in Verse*

Readings in the chief English narrative poets, Chaucer, Scott, Byron, Morris, Maselfield, and others. *Professor* BENEDICT.

Three hours. First semester. Elective for Sophomores who have credit for a semester's work in English Literature. *Mon., Wed., Fri., at 11.25.*

[35. *English Literature from 1798 to 1832, Poetry*]

The reaction from classicism; the influence of the French Revolution; liberalism and individualism in English poetry; contemporary criticism. Wordsworth, Coleridge, Southey, Scott, Byron, Shelley, Keats, and Landor.

Three hours. First semester. Elective for students who have credit for a semester's work in English Literature. Not offered in 1920-21.

[36. *English Literature from 1798 to 1832, Prose*]

The development of the romantic novel; the rise of the reviews and quarterlies; essays and miscellaneous prose. Scott, Jane Austen, Coleridge, Jeffrey, De Quincey, Lamb, Hazlitt, and Macaulay.

Three hours. Two or three hours of attendance. Second semester. Elective for students who have credit for a semester's work in English Literature. Not offered in 1920-21.

37. *English Literature from 1832 to 1892, Prose*

Modifications of romanticism; realism; the influence of science and democracy; tendencies at the end of the century. Essays, history, miscellaneous prose, the novel. Carlyle, Ruskin, Arnold, Pater, Huxley, Dickens, Thackeray, Charlotte Brontë, George Eliot, Meredith, and Hardy. *Professor* DAMON.

Three hours. Two or three hours of attendance. First semester. Elective for students who have credit for a semester's work in English Literature. *Mon., Wed., Fri., at 12.25.* Not to be offered in 1921-22.

38. *English Literature from 1832 to 1892, Poetry*

Modifications of romanticism; the influence of science and democracy; tendencies at the end of the century. Tennyson, Browning, Arnold, Clough, Rossetti, Morris, and Swinburne. *Professor DAMON.*

Three hours. Two or three hours of attendance. Second semester. Elective for students who have credit for a semester's work in English Literature. *Tu., Th., Sat., at 12.25.* Not to be offered in 1921-22.

31. *Browning*

Reading and interpretation of Browning's most significant poems. *Professor BRONSON.*

Three hours. First semester. Elective for students who have credit for a semester's work in English Literature. *Tu., Th., Sat., at 11.25.* Not to be offered in 1921-22.

46. *The Poetic Drama of the Nineteenth Century*

Reading of the plays of Byron, Shelley, Tennyson, Browning, Swinburne, Phillips, Yeats, and Dunsany; study of the conditions which drove the poetic drama from the stage; its sporadic reappearance; present conditions. *Professor DAMON.*

Three hours. Two or three hours of attendance. Second semester. Elective for students who have credit for a year's work in English Literature. *Tu., Th., Sat., at 11.25.* Not to be offered in 1921-22.

25, 26. *Shakspeare*

Careful study of a few plays, with special attention to exact interpretation. In 1920-21 the plays to be read are *Othello, Lear, Pericles, Julius Caesar, Antony and Cleopatra, Cymbeline.* *Professor HASTINGS.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 11.25.* Not to be offered in 1921-22.

27, 28. *Shakspeare*

A brief survey of the drama before Shakspeare; Shakspeare as playwright and poet. Reading of all the plays; careful study of the great tragedies. *Professor POTTER.*

Three hours. Through the year. Elective for students who have credit for a year's work in English Literature. *Tu., Th., Sat., at 10.25.*

[21, 22. *The Drama in England to 1642*]

The drama as a literary type and its history in England to the closing of the theatres.

Three hours. Two or three hours of attendance. Through the year. Elective for students who have credit for a year's work in English Literature. Not offered in 1920-21.

[23, 24. *The Modern English Drama*]

The history of the English drama from 1660 to the present time. Reading and discussion of the work of the chief playwrights from Wycherley and Congreve to Jones, Pinero, and Shaw.

Three hours. Through the year. Elective for students who have credit for a year's work in English Literature. Not offered in 1920-21.

[29. *English Literature, exclusive of the Drama, from 1558 to 1603*]

Elizabethan verse and prose in their relation to the great movements of the age, with special attention to Spenser and Bacon.

Three hours. Two or three hours of attendance. First semester. Elective for students who have credit for a year's work in English Literature. Not offered in 1920-21.

[30. *English Literature, exclusive of the Drama, from 1603 to 1660*]

Puritanism in literature; the Cavalier lyrics; the great prose writers; all the English poems and the more important prose works of Milton.

Three hours. Two or three hours of attendance. Second semester. Elective for students who have credit for a year's work in English Literature. Not offered in 1920-21.

[33, 34. *The English Novel*]

The history of the English novel from 1700 to 1900; reading and discussion of the greater English novelists, including Defoe, Richardson, Fielding, Smollett, Scott, Jane Austen, Dickens, Thackeray, Charlotte Brontë, George Eliot, Meredith, Hardy, and Stevenson.

Three hours. Two or three hours of attendance. Through the year. Elective for students who have credit for a year's work in English Literature. Not offered in 1920-21.

39, 40. *American Literature*

First semester: a survey of the whole field from colonial times to the end of the nineteenth century, with reading of representative works.

Second semester: a more detailed study of Poe, Emerson, Longfellow, Lowell, Whitman, and Mark Twain. Either term may be taken separately. *Professor BRONSON.*

Three hours. Two or three hours of attendance. Through the year. Elective for students who have credit for a year's work in English Literature. *Tu., 3 to 4; Th., 3 to 5.* Not to be offered in 1921-22.

41. *Contemporary Poets and Essayists*

A study of the tendencies of modern thought as reflected in English and American poets and essayists of the present generation, including Henley, Watson, Dowson, Noyes, Brooke, Masfield, Hovey, Moody, Masters, Amy Lowell, Frost, Lang, Benson, Chesterton, Agnes Repplier, and Crothers. *Professor CROSBY.*

Three hours. Two or three hours of attendance. First semester. Elective for Juniors and Seniors who have credit for a year's work in English Literature. *Mon., Wed., Fri., at 12.25.* Not to be offered in 1921-22.

42. *Contemporary Novels*

Reading and study of leading English and American novelists of the present generation, including Hewlett, Bennett, De Morgan, Wells, Conrad, Galsworthy, Ethel Sidgwick, and Edith Wharton. *Professor BRONSON.*

Three hours. Two or three hours of attendance. Second semester. Elective for Juniors and Seniors who have credit for a year's work in English Literature, with a grade of *A* or *B* in one semester. *Mon., Wed., Fri., at 12.25.* Not to be offered in 1921-22.

[15, 16. *Old English*]

Essentials of Anglo-Saxon grammar; prose selections; *Béowulf*.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1920-21.

19, 20. *Middle English*

Emerson's *Middle English Reader*, with additional selections. An introduction to the study of historical grammar and of the literature of the thirteenth and fourteenth centuries. *Professor POTTER.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon. at 3; Wed., 3 to 5.*

[17, 18. *Chaucer*]

Reading of most of Chaucer's works; discussion of the chief types of medieval literature; study of Middle English grammar, with some attention to the development of Modern English.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Not offered in 1920-21.

43, 44. *Seminary in English*

First semester: history and analysis of rhythms and verse-forms; experiments on the phonetics of verse; practice in writing verse. Second semester: special topics in literary history. *Professor* BENEDICT.

Three hours. Two hours of attendance. Through the year. Elective for Graduates and for Seniors who have received *A* or *B* in two years' work in English Literature. *Mon.*, 4 to 6.

XI. GEOLOGY †

CHARLES WILSON BROWN, A.M., *Associate Professor of Geology*

RICHARD MONTGOMERY FIELD, PH.D., *Assistant Professor of Geology*

1. *Elementary Physical Geology*

An introductory course in the interpretation of geological evidence. The origin of the earth; its land forms, materials, and structure, and the agencies concerned in their production. *Professors* BROWN and FIELD.

Three hours. First semester. Elective for Undergraduates. *Mon.*, *Wed.*, *Fri.*, at 10.25. Laboratory fee, \$1.50.

6. *Principles of Economic Geography*

A study of the environmental factors—such as the physiography, the meteorology and climate, soils, and the geographic distribution of natural resources—that influence the utilization and the economic and political development of a region in the location and development of transportation routes and commerce, agriculture, forestry, manufacturing, and other industries, and affect racial and political boundaries. *Professor* BROWN.

Three hours. Second semester. Elective for Undergraduates. *Mon.*, *Wed.*, *Fri.*, at 10.25.

† 1 is preliminary to the other courses except 9, 10. Course 4 is of particular value to students intending to specialize in economics, history, or social science, or to enter business; 2, 17, 18 to students in biology; 4, 7 to students in engineering; 9, 10 to students in chemistry.

2. *Elementary Historical Geology*

The geological history of the earth from its origin to recent times, emphasizing North America, its dynamic, geographic, and climatic changes, and evolution of life. *Professor FIELD.*

Three hours. Second semester. Elective for Undergraduates who have credit for 1. *Mon., Wed., Fri., at 10.25.*

4. *Advanced Structural and Dynamical Geology*

A study of the origin and development of the structural features of the earth's crust in connection with sedimentation, mountain-building, folding, faulting and vulcanism, ore-deposits, or occurrence of coal or oil. *Professors BROWN and FIELD.*

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors who have credit for 1. *Tu., Th., at 10.25.*

7. *Economic Geology of Materials*

The geology of fuels, of the major ores, of raw materials used for structural and building purposes; their geographic distribution, geologic occurrence, recognition, and production. *Professors BROWN and FIELD.*

Three hours. Second semester. Two lecture and two laboratory hours. Elective for Sophomores, Juniors, and Seniors who have credit for 1.

[5. *General Geography of Latin America*]

A study of the topography and climate, natural resources, distribution of agricultural and other products, and the development of transportation routes and commerce.

Three hours. Two lecture and two conference hours. First semester. Elective for Undergraduates except Freshmen and Sophomores who are taking another course in the department. *1st division, Tu., Th., at 10.25.* Not offered in 1920-21.

9, 10. *Mineralogy and Petrography*

An introductory course in the macroscopic and microscopic study of minerals, ores, and rocks, their chemical relations and economic uses. First semester: discussion of crystal forms and the laws of crystallography; determination by physical properties and blow-pipe analysis of the more common minerals and ores. Second semester: study of the optical properties of the rock-forming minerals, rocks, and ores, under the polarizing microscope; determination of rock types; discus-

sion of the fundamental principles of the origin and classification of rocks. *Professors BROWN and FIELD.*

Three hours. Six hours of attendance. Through the year. Elective for Sophomores, Juniors, and Seniors. Laboratory fee, \$3 a semester. *Tu., Th., at 11.25.*

[13. *Stratigraphy*]

Detailed study of the problems connected with the stratigraphy, paleontology, and index fossils of North America.

Three hours. First semester. Elective for Juniors, Seniors, and Graduates who have credit for 1, or 17, 18. Not offered in 1920-21.

17, 18. *Paleontology*

The origin and significance of fossil plants and animals, with special reference to their evolution as shown by the paleontological record. Emphasis is laid upon the morphology, classification, and development of groups that are extinct, or only poorly represented at the present time. *Professor FIELD.*

Three hours. Through the year. Two lecture and two laboratory hours. Elective for Sophomores, Juniors, or Seniors. Either semester may be elected independently. Geology 1 and Biology 1 are recommended as preliminaries.

11, 12. *Research in Geology and Geography*

Advanced work in the library, laboratory, or field, in the various phases of geology or geography. Arranged to meet the needs of individual students. The region in which the University is situated provides unusual opportunities in a small compass for the study of both simple and complex problems in physiographic, metamorphic, petrographic, mineralogic, paleontologic, and stratigraphic geology. *Professors BROWN and FIELD.*

One to six hours. Through the year. Elective for Graduates and approved Undergraduates. Either semester may be elected independently.

XII. GERMANIC LANGUAGES AND LITERATURES

ASA CLINTON CROWELL, PH.D., *Associate Professor of the Germanic Languages and Literatures*

ROBERT MCBURNEY MITCHELL, PH.D., *Assistant Professor of the Germanic Languages and Literatures*

1, 2. *Elementary German, First Year*

Aims to enable the student to read easy German prose. Grammar, dictation, practice in writing. *Mr. MILLER.*

Three hours. Through the year. Elective for students who have not presented German for admission. Students wishing to complete six hours of elementary German in preparation for 5, 6 should elect also 1 A, 2 A. *Tu., Th., Sat., at 9.25.*

1 A, 2 A. *Elementary German, First Year*

Aims to acquaint the student with the vocabulary of daily life for use in speaking and writing. Reading, constant oral practice, simple connected composition. Essentials of grammar. *Professor CROWELL.*

Three hours. Through the year. Elective for students who have not presented German for admission. Students wishing to complete six hours of elementary German in preparation for 5, 6 should elect also 1, 2. *Mon., Th., Fri., at 4.*

3, 4. *Elementary German, Second Year*

Reading of modern German stories, lyrics, and descriptive prose. Review of grammar; composition and conversation. *Professor MITCHELL.*

Three hours. Through the year. Elective for students who have credit for 1, 2 or 1 A, 2 A or who have presented elementary German (1 year) for admission. *Tu., Th., Sat., at 10.25.*

5, 6. *Intermediate German*

Reading of fairly difficult modern German prose and one or two dramas of the classical period. Review of grammar; composition; conversation based upon the texts read. *Mr. MILLER.*

Three hours. Through the year. Elective for students who have credit for 3, 4 or for 1, 2 and 1 A, 2 A or who have presented elementary German (2 years) for admission. *Tu., Th., Sat., at 10.25.*

5 A, 6 A. *Oral Practice and Composition*

Aims to afford facility in the practical use of the German language. Constant practice in speaking and writing. *Professor MITCHELL.*

Three hours. Through the year. Elective for students who have credit for 3, 4 and for others by permission. Cannot be taken to fulfil the requirements in modern language. *Mon., Wed., Fri., at 9.25.*

7, 8. *Advanced German*

One drama of Goethe or Schiller; one drama of Kleist or Hebbel; lyrics; two short stories. Talks in German on German literature; oral and written reports in German. *Professor CROWELL.*

Three hours. Through the year. Elective for students who have credit for 5, 6; or who have passed 3, 4 with grade *B*; or who have presented intermediate German for admission. *Tu., Th., Sat., at 10.25.*

9, 10. *Modern German: Advanced Composition*

Aims to train the student in speaking, reading, writing, and understanding modern German. Reading of difficult texts dealing with the political, economic, social, and educational institutions of modern Germany, its theatre, music, art, science, and philosophy. A month will be devoted to the study of current German newspapers and periodicals. Talks in German; oral and written reports in German; letter-writing, composition, conversation. *Professor MITCHELL.*

Three hours. Through the year. Elective for students who have credit for 7, 8; or who have passed 5, 6 with grade *B* or 3, 4 with grade *A*; or who have presented intermediate German for admission. *Tu., Th., Sat., at 11.25.*

19, 20. *Introduction to Scientific Prose*

Intended especially for students who expect to use German in the pursuit of other subjects. Careful study of word-formation and special vocabularies. Translation from such books as Greenfield's *Technical and Scientific German* and Lassar-Cohn's *Die Chemie im täglichen Leben*. *Professor CROWELL.*

Three hours. Through the year. Elective for students who have credit for 5, 6. *Mon., Wed., Fri., at 10.25.*

[17, 18. *Lessing and Schiller*]

Devoted mainly to the dramas of Lessing and Schiller. Lessing the writer and reformer; his early dramas as precursors of his greater

productions. English and French influence. The development of the middle-class tragedy. Problems common to all of Schiller's dramas. Reading and translations of representative pieces. Talks in German; reports in German and English.

Three hours. Through the year. Elective for students who have credit for 5, 6 and for others by permission. Not offered in 1920-21.

23, 24. *Goethe*

Study of Goethe's dramas including *Faust* (in the second semester), with selections from *Werthers Leiden* and *Dichtung und Wahrheit*. *Faust* compared with other productions in European literature presenting a kindred problem. Translation and interpretation of the texts. Talks in German; reports in German and English. *Professor CROWELL*.

Three hours. Through the year. Elective for students who have passed 5, 6 with grade C and for others by permission. *Tu., Th., Sat., at 11.25.*

13, 14. *The German Short Story*

The development of the short story into a literary form. The study of the *Novelle* as represented by Kleist, Ludwig, Heyse, Storm, C. F. Meyer, Keller, and others, with frequent reference to the chief writers of the short story in France, England, and America. Lectures and reports in German and English. *Professor MITCHELL*.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10, or who have passed 5, 6 with grade B. *Tu., Th., Sat., at 12.25.*

[15, 16. *The German Drama of the Nineteenth Century*]

A study of the development of the German drama from waning romanticism to realism (Kleist, Grillparzer, Hebbel, Hauptmann, Sudermann), with frequent reference to the chief representatives of the modern drama in other countries. Lectures in German; oral and written reports in German and English.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10, or who have passed 5, 6 with grade B. Not offered in 1920-21.

[25, 26. *German Literature to the End of the Classical Period*]

Aims to acquaint the student with the most important movements in the evolution of German literary life before 1832. Lectures in German; reports on assigned topics; extensive reading.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. Not offered in 1920-21.

[27, 28. *German Literature in the Nineteenth Century*]

A study of the literary life of Germany as an expression of German civilization in the nineteenth century. The Romantic School, Young Germany, Naturalism, Realism, Neo-Romanticism. Lectures in German; reports on assigned topics; extensive reading.

Three hours. Through the year. Elective for students who have credit for 7, 8, or 9, 10. Not offered in 1920-21.

31. *Gothic*

The Gothic language, with reading of extracts in Streitberg's *Gotisches Elementarbuch* or Braune's *Gotische Grammatik*. Professor CROWELL.

Three hours. Second semester. Elective for Graduates and approved Undergraduates.

XIII. GREEK LITERATURE AND HISTORY

FRANCIS GREENLEAF ALLINSON, PH.D., *David Benedict Professor of Greek Literature and History, Director of the Museum of Fine Arts*

KENDALL KERFOOT SMITH, PH.D., *Assistant Professor of Greek Literature and History*

A, B. *Beginner's Course*

Greek Grammar, selections from Plato, Xenophon, Aesop, the Greek Anthology, Menander, Euclid, and the New Testament; one book of Homer. A student who completes this course satisfactorily will be admitted to Greek 1 (a); or, if he also completes the private reading of supplementary selections and passes a special examination on them, he may be admitted to Greek 1. Professor SMITH.

Three hours. Through the year. Elective for students who have not presented elementary and advanced Greek for admission. *Mon., Wed., Fri., at 12.25.*

1. *Greek Poetry exclusive of the Drama*

Selections from the *Iliad* and the *Odyssey*, from the more important lyric poets, and from the Epigrams. Professor SMITH.

Three hours. First semester. Elective for students who have presented elementary and advanced Greek for admission, or who have credit for A, B and have done the additional work indicated above. *Tu., Th., Sat., at 12.25.*

1 (a). *Homer and reading supplementary to Greek B.*

Continued by Greek 2 in the second semester. *Professor ALLINSON.*
Three hours. First semester. Elective only for students who have credit for Greek A, B. *Tu., Th., Sat., at 10.25.*

2. *Plato and Lysias*

Plato: *Apology* and *Crito*, with selections from the *Phaedo*, and collateral readings from Xenophon's *Memorabilia* and the *Clouds* of Aristophanes. Lysias: *Orations* VII, XXII, XXIII, XXIV. *Professor ALLINSON.*
Three hours. Second semester. Elective for students who have credit for 1 or 1 (a). *Tu., Th., Sat., at 10.25.*

3. *Lucian and the Dramatic Poets*

Selections from Lucian. Lectures on the Greek drama. The *Oedipus Tyrannus* of Sophocles and collateral reading in the *Prometheus* of Aeschylus. *Professor ALLINSON.*
Three hours. First semester. Elective for Sophomores. *Mon., Wed., Fri., at 10.25.*

4. *The Historians*

The eighth book of Herodotus, with collateral reading of the *Persians* of Aeschylus and Plutarch's *Themistocles*. The seventh book of Thucydides, with collateral reading of the *Acharnians* of Aristophanes. *Professor SMITH.*
Three hours. Second semester. Elective for Sophomores. *Mon., Wed., Fri., at 10.25.*

[5. *The Drama*]

Aeschylus: *Agamemnon*. Euripides: *Medea*. Aristophanes: *Frogs*. Menander: *Arbitrants* and *The Girl from Samos*. *Professor ALLINSON.*
Three hours. First semester. Elective for Juniors and Seniors. Not offered in 1920-21.

[6. *Oratory*]

Demosthenes: *On the Crown*; selections from his other speeches and from other Attic orators.
Three hours. Second semester. Elective for Juniors and Seniors. Not offered in 1920-21.

7. *Aristophanes, Menander, and Plato*

The *Birds*; the *Arbitrants*; *Protagoras*. Collateral readings from the *Phaedrus* and *Meno*. Professor ALLINSON.

Three hours. First semester. Elective for Juniors and Seniors. *Mon., Wed., Fri., at 12.25.*

8. *Aristotle*

The *Politics* and *Ethics*. A study of the fundamental Aristotelian principles of politics and ethics. Professor SMITH.

Three hours. Second semester. Elective for Juniors and Seniors. Hours to be arranged.

12. *Greek Composition*

Professor ALLINSON.

One hour. Second semester. Elective for Undergraduates.

[13, 14. *Modern Greek*]

Introduction to the language; readings from living Greek authors and Greek newspapers. Designed for students intending to continue their training in Greek at the American School of Classical Studies in Athens.

One hour. Through the year. Elective for Juniors and Seniors. Not offered in 1920-21.

15. *Greek Civilization*

The life of the Greeks from Homer to the second century after Christ, with special study of the political, social, and religious institutions of the classical period as illustrated by the literature, history, and monuments of art. Must be preceded or followed by Latin 16, Roman Civilization. The two semesters together constitute the required course in Classical Civilization. Professors ALLINSON and SMITH.

Three hours. First or second semester. Required in the Freshman or Sophomore year of candidates for the degree of Bachelor of Philosophy. Not elective. *1st division, Mon., Wed., Fri., at 9.25; 2d division, Mon., Wed., Fri., at 11.25.*

[19. *Greek Literature in English*]

The Greek poets and prose writers from Homer to Lucian. The Drama and Plato will be emphasized. The purpose of this course is to open

up, for those who do not read Greek, the contributions of Hellenic Literature.

Three hours. First or second semester. Elective for Undergraduates. Hours to be arranged. This course may be followed in the second semester by Greek 16. Not offered in 1920-21.

[16. *The Natural History of Language*]

Geographical outline of the languages of the Eastern and Western Hemispheres. Divisions by structure. More detailed study of the Indo-European family of languages.

Three hours. Second semester. Elective for Undergraduates. Hours to be arranged. This course may be preceded in the first semester by Greek 19. Not offered in 1920-21.

17, 18. *Greek Seminary*

First semester: Selections from the Greek Anthology arranged historically. Survey of contemporary Greek history and literature from *Solon* to *Lucian*. *Professor ALLINSON*. Second semester: Greek Sources for the History of the Near East. *Professor SMITH*.

Three hours. Two hours of attendance. Through the year. Elective for Graduates and approved Seniors.

XIV. HISTORY

THEODORE COLLIER, PH.D., *Professor of European History*

VERNER WINSLOW CRANE, PH.D., *Assistant Professor of American History on the George L. Littlefield Foundation*

JAY BARRETT BOTSFORD, A.M., *Instructor in History*

1, 2. *History of Medieval and Modern Europe* ‡

A general survey of the history of western Europe from the Middle Ages to the conclusion of the World War. Lectures, text-book, assigned reading, reports, and frequent tests. *Professor COLLIER and Mr. BOTSFORD*.

Three hours. Through the year. Required of candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who have not presented for admission Medieval and Modern European History, or English History. Should be taken

‡ Candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who have presented for admission Medieval and Modern European History, or English History, but not American History, must take 21, 22. Other students must take 1, 2.

in the Freshman or Sophomore year. Elective, upon permission, for students who have credit for or are taking 21, 22. *Mon., Th., Fri., at 2.*

9. *Modern European History, 1815-1871*

An advanced course in the history of Europe from the Congress of Vienna to the conclusion of the Franco-Prussian War. Lectures, assigned reading, reports, and tests. *Professor COLLIER.*

Three hours. First semester. Elective for students who have credit for 1, 2 or 21, 22. *Tu., Th., Sat., at 10.25.*

10. *Modern European History, 1871-1919*

A continuation of 9, from the founding of the German Empire to the Treaty of Versailles. *Professor COLLIER.*

Three hours. Second semester. Elective for students who have credit for 1, 2 or 21, 22. 9 and 10 form a continuous course, and should be taken in their proper chronological order; but, with the permission of the instructor, either course may be elected independently. *Tu., Th., Sat., at 10.25.*

13, 14. *European History Seminary*

Intensive study of a limited period or of a special phase of political or social development, with a view to training in historical method and the use of sources. Subject for 1920-21: The Growth of Radicalism in the Nineteenth Century. *Professor COLLIER.*

Three or six hours. Two hours of attendance. Through the year. Elective for Graduates and approved Juniors and Seniors.

21, 22. *The United States under the Constitution* †

A general course, with stress upon the economic and constitutional phases of American history since 1787. *Professor CRANE.*

Three hours. Through the year. Required, not later than the Sophomore year, of students who have presented for entrance Medieval and Modern European History, or English History, but not American History. Elective, by permission, for students who have credit for or are taking 1, 2. *Tu., Th., Sat., at 9.25.*

[27, 28. *The History of the United States in its Contact with Foreign Nations*]

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates, and for Sophomores who have had 1, 2 or 21, 22. Either semester may be elected independently. Not offered in 1920-21.

† Candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who have presented for admission Medieval and Modern European History, or English History, but not American History, must take 21, 22. Other students must take 1, 2.

25, 26. *American History Seminary*

Designed to afford training in the methods of historical investigation and the use of sources through the intensive study of some selected topics in a limited field. Subject for 1920-21: Selected topics in the history of the British colonial empire in America during the eighteenth century. *Professor CRANE.*

Three or six hours. Two or three hours of attendance. Through the year. Elective for Graduates and approved Seniors. Should be preceded by one or more courses in American history; but in exceptional cases may be taken by students who at the same time are taking 21, 22 or 27, 28.

29, 30. *Economic, Social, and Cultural Development of the United States*

Professor CRANE.

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates, and for Sophomores who have credit for 1, 2 or 21, 22. Either semester may be elected independently. *Tu., Th., Sat., at 11.25.*

XV. MATHEMATICS†

ROLAND GEORGE DWIGHT RICHARDSON, PH.D., *Professor of Pure Mathematics*

OTIS EVERETT RANDALL, PH.D., *Professor of Applied Mathematics*

RAYMOND CLARE ARCHIBALD, PH.D., *Associate Professor of Pure Mathematics*

CLINTON HARVEY CURRIER, A.M., *Assistant Professor of Mathematics*

ROBERT WILBUR BURGESS, PH.D., *Assistant Professor of Mathematics*

RAY EDWIN GILMAN, PH.D., *Assistant Professor of Mathematics*

RAYMOND FRANKLIN BORDEN, PH.D., *Instructor in Mathematics*

RAYMOND LOUIS WILDER, PH.B., *Assistant in Mathematics*

CHAUNCEY DEPEW WENTWORTH, A.B., *Assistant in Mathematics*

61, 62. *Elementary Analysis, First Year*

Designed to give a brief introduction to some of the concepts and methods of mathematics. Selected topics from Graphical Representation, Trigonometry, Analytic Geometry, and Calculus, which give

† Students presenting the usual units for admission will naturally take 61, 62; those presenting Trigonometry, 63, 64. Those who wish to specialize in mathematics should consult some member of the department before registering, and should, if possible, take two

an introduction to the fundamental mathematical ideas of scientific and economic theories. *Professors CURRIER, BURGESS, and GILMAN, Dr. BORDEN and Mr. WENTWORTH.*

Three hours. Through the year. Elective for students who have not taken any mathematics in college and who have not presented Plane Trigonometry for admission. *Three divisions, Mon., Wed., Fri., at 9.25; three divisions, Tu., Th., Sat., at 9.25; one division, Mon., Wed., Fri., at 10.25.* There is an honor division in each of the first two groups.

61 R. *Elementary Analysis*

A repetition of 61. *Professors BURGESS and GILMAN.*

Three hours. Second semester. Elective for those who enter at mid-year, and for others who have no credit for this course. *One division, Mon., Wed., Fri., at 9.25; one division, Tu., Th., Sat., at 9.25.*

62 R. *Elementary Analysis*

A repetition of 62. *Professor GILMAN.*

Three hours. First semester. *Tu., Th., Sat., at 9.25.*

63, 64. *Elementary Analysis, First Year*

Similar to 61, 62, except that Algebra will be substituted for Trigonometry. *Professor ARCHIBALD and Mr. WILDER.*

Three hours. Through the year. Elective for students who have credit for Plane Trigonometry. *Two divisions, Mon., Wed., Fri., at 9.25.*

1. *Solid Geometry*

Dr. BORDEN.

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors, and for Freshmen who have not presented Solid Geometry for admission and who wish to take an additional course. Required without college credit of candidates for the degree of Bachelor of Science who have not presented it for admission. *Tu., Th., Sat., at 11.25.*

courses in the first year. For the second and following years 65, 66, 7, 8 is the regular sequence and in addition the student should take 1, 3 (if he has not already credit for them), and as many as possible of the courses 9-12, 16, 21-44, 55, 56.

It is recommended that students who contemplate teaching in the secondary schools elect courses through 8, 27, and 41-44.

Courses 17-20, 50, are primarily for candidates for the degree of Bachelor of Science, but may be elected by others who wish to advance more rapidly with their mathematical preparation.

Courses 21-40, 55, 56 are designed primarily for Graduates. Two or three of these courses are offered each year according to the needs of the students. For those who have taken all of them, other courses can usually be arranged.

Any course in which five students do not register may not be given.

3. *Algebra*

Permutations and combinations, probability, complex numbers, theory of equations, etc. Fundamental for students who wish to specialize in mathematics. *Professor ARCHIBALD and Dr. BORDEN.*

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors, and for Freshmen who did not present Advanced Algebra for admission and who wish to take an additional course. *Two divisions, Tu., Th., Sat., at 11.25.*

65, 66. *Elementary Analysis, Second Year*

A continuation of 61, 62. The main emphasis will be laid on the Differential and Integral Calculus. New topics in Trigonometry and Analytic Geometry will be taken up. *Professor RICHARDSON.*

Three hours. Through the year. Elective for students who have credit for 62 or 64. *Mon., Wed., Fri., at 9.25.*

7, 8. *Analytic Geometry and Differential and Integral Calculus*

Professor GILMAN.

Three hours. Through the year. Elective for students who have credit for 66, or for 6 as offered before 1919-20. *Tu., Th., Sat., at 12.25.*

9. *Differential Equations*

Professor BURGESS.

Three hours. First semester. Elective for students who have credit for 8 or 20. A part of this course, counting for one hour, is recommended during the first third of the semester for all students specializing in Electrical Engineering. *Tu., Th., Sat., at 12.25.*

10. *Graphical Methods*

Designed primarily for engineering students; gives an introduction to the use of graphical methods employed in the solution of problems and includes the following topics: charts for equations in two and three variables, alignment charts, empirical formulae, interpolation, approximate integration. Based on Lipka's *Graphical and Mechanical Computation*. *Professor BURGESS.*

Three hours. Second semester. Elective for those who have credit for 7, 8 or 19, 20. *Tu., Th., Sat., at 12.25.*

[11. *Analytic Geometry of Three Dimensions*]

An introductory course based on Snyder and Sisam's *Analytic Geometry of Space*, pages 1-108.

Three hours. First semester. Elective for students who have credit for 7, 8, and for others by permission. Not offered in 1920-21.

[12. *Modern Analytic Geometry*]

Topics in Plane Analytic Geometry with special reference to tangential coördinates.

Three hours. Second semester. Elective for students who have credit for 7, 8, and for others by permission. Not offered in 1920-21.

16. *Spherical Trigonometry*

Professor CURRIER.

One hour. Second semester. Elective for students who have credit for Plane Trigonometry.

17, 18. *Plane Trigonometry, Analytic Geometry, and Calculus*

Professors BURGESS and GILMAN, Mr. WILDER.

Four hours. Through the year. Required of candidates for the degree of Bachelor of Science. There will be a special division during the first semester for those who present Plane Trigonometry for admission. *Three divisions, Tu., Wed., Th., Sat., at 8.*

18 R. *Calculus*

A repetition of 18. Professor ARCHIBALD.

Four hours. First semester. *Mon., Wed., Fri., at 11.25; Tu. at 8.*

19, 20. *Analytic Geometry and Calculus*

Professor RICHARDSON.

Three hours. Through the year. Required of candidates for the degree of Bachelor of Science. *Mon., Wed., Fri., at 11.25.*

19 R. *Calculus*

A repetition of 19. Dr. BORDEN.

Three hours. Second semester. *Mon., Wed., Fri., at 11.25.*

[21, 22. *Function Theory of a Complex Variable*]

Three hours. Through the year. Elective for Graduates and approved Undergraduates. Not offered in 1920-21. To be offered in 1921-22.

[25, 26. *Advanced Algebra*]

Three hours. Through the year. Elective for students who have credit for 3, 41, 42, and for others by permission. Not offered in 1920-21.

27, 28. *Projective Geometry*

Introductory course. The synthetic treatment of the subject during the first semester is based on Dowling's *Projective Geometry*. Professor ARCHIBALD.

Three hours. Through the year. Elective for Graduates and approved Undergraduates. *Mon., Wed., Fri., at 12.25.*

29, 30. *Introduction to Analysis*

The foundations of the differential calculus; definite integrals; line integrals; multiple integrals. Professors RICHARDSON and GILMAN.

Three hours. Through the year. Elective for students who have credit for the Calculus, and who have credit for or are taking 41, 42. *Mon., Wed., Fri., at 11.25.*

[31, 32. *Applications of Calculus to Geometry*]

Introductory course in the Differential Geometry of plane and space curves, curved, ruled, and developable surfaces, families and nets of curves on surfaces, triply orthogonal systems of surfaces, and conformal representation of one surface upon another. The historical development of the subject is also presented, and Gauss's memoir on "General Investigations of Curved Surfaces" is read.

Three hours. Through the year. Elective for students who have credit for 8 or 20. Not offered in 1920-21.

[39, 40. *Course in Advanced Topics*]

Amount of credit to be arranged. Elective for Undergraduates and Graduates who have adequate preparation. Not offered in 1920-21.

41, 42. *Fundamental Problems of Algebra*

An introduction to some of the concepts of modern analysis; designed for students who expect to teach as well as for those who are preparing for advanced work in mathematics. Among the topics to be treated are: the number system; limits; infinite series; the fundamental operations; determinants and linear equations. Professor RICHARDSON and Dr. BORDEN.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 11.25.*

[43, 44. *Foundations, Methods, and Problems of Geometry*]

Designed for those who expect to teach mathematics. The main topics of the course will be: foundations; Euclid and his modern rivals;

American, French, German, and Italian texts; methods for attacking Euclidean problems; geometrography; famous problems; history. Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1920-21. To be offered in 1921-22.

50. *Descriptive Geometry*

Professor RANDALL.

Three hours. Second semester. Required in the Freshman year of candidates for the degree of Bachelor of Science who have credit for Engineering 3. Elective for other approved students. *Mon., Wed., Fri., at 10.25.*

53. *Mathematical Theory of Investment*

The computation of interest, both simple and compound; the amortization of debts, the theory of bond values, depreciation, sinking funds, inheritance taxes, annuities, and life insurance. Based on Skinner's *The Mathematical Theory of Investment*. *Professor CURRIER.*

Three hours. First semester. Elective for Juniors and Seniors who have credit for one year of college mathematics, and for Sophomores by special permission. The necessary mathematics will be reviewed. *Mon., Wed., Fri., at 10.25.*

54. *Mathematical Theory of Statistics*

Use of statistical methods, statistical averages, measurement of variability, dispersion and skewness, measurement of relationship, the correlation coefficient, the frequency curve, use of tabular and graphic methods, index numbers. *Professor BURGESS.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates who have credit for one year of college mathematics. Hours to be arranged.

[55, 56. *Theoretical Mechanics*]

An introductory course in statics and dynamics with numerous problems.

Three hours. Through the year. Elective for Graduates and approved Undergraduates who have credit for 7, 8 or 19, 20. Not offered in 1920-21.

XVI. MUSIC

GENE WILDER WARE, A.B., *Lecturer in Music*

3, 4. *The Appreciation of Music*

Not technical but designed to meet the needs of students, whether

or not themselves performers, who wish to acquire an intelligent understanding and enjoyment of good music.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Mon., Wed., Fri., at 12.25.*

XVII. PHILOSOPHY†

EDMUND BURKE DELABARRE, PH.D., *Professor of Psychology*

WALTER GOODNOW EVERETT, PH.D., *Professor of Philosophy and Natural Theology*

ALFRED HARRISON JONES, PH.D., *Associate Professor of Logic*

BENJAMIN MALCOLM HARRIS, B.D., A.M., *Lecturer in Philosophy at the Women's College*

ARTHUR GODFREY SELLEN, A.M., *Assistant in Philosophy*

1, 2. *Introduction to Philosophy*

Designed to prepare the student for the study of philosophy, and to acquaint him with some of its most significant problems and results. *Professor JONES.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. *Mon., Wed., Fri., at 9.25.*

3, 4. *Psychology and Ethics*

First semester: Psychology. A survey of the main facts and laws of mental life, aiming to provide a sound foundation for further acquaintance with this and allied subjects, for an improved judgment in dealing with many practical problems, and for understanding the psychological bases of philosophy. Second semester: Ethics. An introductory course dealing in a concrete way with the moral values of daily experience, and intended to aid the student in forming a practical philosophy of life. First semester, *Professor DELABARRE.* Second semester, *Professor EVERETT.*

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Either semester may be elected independently by Seniors. *Tu., Th., Sat., at 9.25.*

† The required work in Philosophy must be completed not later than the end of the Junior year. The following courses will be accepted as meeting the requirement: 1, 2; 3, 4; 7, 8; 9, 4; 3, 10; 13, 4.

5, 6. *Psychology, Intermediate Course*

A study of the fundamental principles on which a scientific system of psychology must be based; the nature and composition of consciousness, its relation to bodily processes, and its complete subjection to law; the criteria for accepting evidence and forming sound judgments in connection with the problems of so-called psychical research. *Professor DELABARRE.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for a course in Psychology.

7, 8. *History of Philosophy*

The successive philosophical systems as revealing the logical development of European philosophy. The course also aims to exhibit the significant relations which philosophy has sustained to civilization, especially in its fundamental political, scientific, religious, and cultural elements. *Professor EVERETT.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 10.25.*

9. *Philosophy of Religion*

A constructive study of the nature of the religious consciousness, and of the ultimate problems of religious belief. *Professor EVERETT.*

Three hours. First semester. Elective for Juniors, Seniors, and Graduates who have credit for a year course in Philosophy. *Tu., Th., Sat., at 9.25.* May be taken with 4 to satisfy the requirement of a year's work in Philosophy.

30. *History of Religion*

An outline study of the history of the principal religions of the world. This course is the same as Biblical Literature 30. *Professors FOWLER and JONES.*

Three hours. Second semester. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 10.25.*

10. *Applications of Psychology*

Description of some of the important ways in which the principles of psychology are being practically applied to the problems of modern life. *Professor DELABARRE.*

Three hours. Second semester. Elective for students who have credit for 3. *Tu., Th., Sat., at 8.* May be taken with 3 to satisfy the requirement of a year's work in Philosophy.

11, 12. *Experimental Psychology, Introductory Laboratory Course*
Description of the main lines and results of experimental research; demonstrations by the instructor or the class; training in the use of apparatus and in careful scientific observation and measurement. *Professor DELABARRE.*

Three hours. Six hours of attendance. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for 3.

[13. *Logic*]

Intended to train the student in correct methods of reasoning. Especial attention will be given to the analysis of arguments, and the detection of fallacies.

Three hours. First semester. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 11.25.* May be taken with 4 to satisfy the requirement of a year's work in Philosophy. Not given in 1920-21.

16. *Problems of Philosophy*

A study of some of the chief types of philosophical theory. *Professor JONES.*

Three hours. First semester. An intermediate course elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 11.20.*

14, 15. *Contemporary Philosophy*

A seminary for the study of important philosophical theories of the present day. During 1920-21 the works of Adams and Bosanquet will be read. *Professor JONES.*

Three hours. Through the year. Elective for Seniors and Graduates.

17, 18. *Psychology, Advanced Course*

A seminary for the discussion of important problems in psychology. The problems discussed will vary, and the course may be taken for two or more years. *Professor DELABARRE.*

Three hours. Through the year. Elective for Seniors and Graduates who have credit for 5, 6.

19, 20. *Experimental Psychology, Advanced Laboratory Course*

The aim is to study further the problems of experimental psychology, and, whenever possible, to make original contributions to scientific

knowledge. The problems investigated will vary, and the course may be taken for two or more years. *Professor DELABARRE.*

One to six hours. Two to twelve hours of attendance. Through the year. Elective for students who have credit for 11, 12. May be taken for more than six hours by Graduates.

21, 22. *Advanced Ethics*

A seminary course for the study of the more important problems of ethics. Lectures, written reports, and discussions. Subjects for 1920-21: First semester, The Ethics of the Gospels; second semester, The Problem of Evil. *Professor EVERETT.*

Three hours. Through the year. Elective for Seniors and Graduates who have credit for a year course in Philosophy. *Thursday afternoons.*

XVIII. PHYSICS†

CARL BARUS, PH.D., LL.D., *Hazard Professor of Physics*

ALBERT DE FOREST PALMER, PH.D., *Associate Professor of Physics*

MARCUS LEON SHERIN, B.S., *Instructor in Physics*

1, 2. *Elementary Course*

Designed for those who have had little or no previous training in physics. First semester: dynamics, molecular physics, and heat. Second semester: optics, acoustics, and electricity. Discussion of and laboratory practice in the more elementary features of the subjects. Lectures illustrated by experiments in the class-room and in the laboratory; weekly written exercises. *Professor PALMER and Mr. SHERIN.*

Four hours. Six hours of attendance. Through the year. Elective for Undergraduates who have presented Algebra and Plane Geometry for admission. *Mon., Wed., Fri., at 10.25.* Laboratory fee, \$4 a semester.

29, 30. *Elementary Laboratory Physics*

A series of simple laboratory exercises designed to illustrate the general principles discussed in 1, 2. *Professor PALMER.*

One hour. Two hours of attendance. Through the year. Elective for Undergraduates who have presented Algebra and Plane Geometry for admission. Laboratory fee, \$4 a semester.

† Students who intend to teach Physics should elect courses 1, 2; 3, 4; 5, 6. Those who intend to enter medical school should elect 1, 2.

3, 4. *Intermediate Course*

The more advanced parts of the subjects treated in 1, 2. *Professor BARUS.*

Three hours. Through the year. Elective for students who have credit for 1, 2, and Mathematics 61, 62. *Tu., Th., Sat., at 10.25.*

5, 6. *Experimental Physics*

An introduction to the theory and practice of physical manipulation. Experimental study of physical phenomena selected to meet the needs of individual students. Written reports and solution of problems. *Professor PALMER.*

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 1, 2. Laboratory fee, \$6 a semester.

11, 12. *Advanced Laboratory Course*

Special problems and reference to original sources for methods of solution. *Professors BARUS and PALMER.*

Three or six hours. Six or twelve hours of attendance. Through the year. Elective for students who have credit for 5, 6. Laboratory fee, \$6 a semester.

15, 16. *Advanced Course*

Lectures on dynamics, potential, elastics, hydrostatics, hydrodynamics, viscosity, capillarity, electrostatics, magnetism, electro-magnetism, thermo-electrics, induction, Fresnel's optics, the electro-magnetic theory of light, thermal analytics, and thermodynamics. This course will also include applications of vector and harmonic analysis. *Professor BARUS.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates who have credit for Mathematics 7, 8. The content of the course will vary at the option of the students.

21, 22. *Theory of Measurements*

Lectures and recitations on the theory and precision of measurements, and on methods of taking, recording, and reducing observations; laboratory instruction in selected physical measurements. *Professor PALMER.*

Three hours. Five hours of attendance. Through the year. Elective for students who have credit for 1, 2, and Mathematics 7, 8 or 19, 20. *Tu., Th., at 12.25.* Laboratory fee, \$4 a semester.

23, 24. *Precision Measurements in Photometry, Electricity, and Magnetism*

Professor PALMER.

Three hours. Six hours of attendance. Through the year. Elective for students who have credit for 5, 6 or 21, 22, and Mathematics 7, 8 or 19, 20. Laboratory fee, \$8 a semester.

XIX. ROMAN LITERATURE AND HISTORY

ALBERT GRANGER HARKNESS, A.M., LITT.D., *Professor of Roman Literature and History*

JOHN FRANCIS GREENE, A.M., *Associate Professor of Roman Literature and History*

1. *Cicero's De Senectute, De Amicitia; Terence's Phormio*

Designed to enable the student to acquire facility in reading Latin, and to give an insight into the practical philosophy of the Romans in public and private life. *Professors HARKNESS and GREENE.*

Three hours. First semester. Elective for students who have presented elementary and advanced Latin for admission. *Tu., Th., Sat., at 11.25.*

2. *Selections from Horace*

Critical study of certain poems, supplemented by rapid reading of others. The social and political ideals of the early Empire are emphasized. *Professors HARKNESS and GREENE.*

Three hours. Second semester. Elective for students who have presented elementary and advanced Latin for admission. *Tu., Th., Sat., at 11.25.*

3. *Selections from Tacitus, Pliny the Younger, Martial*

Especial attention will be given to the literary style and to the moral and social life of the period. *Professor GREENE.*

Three hours. First semester. Elective for Sophomores. *Mon., Wed., Fri., at 12.25.*

4. *Plautus' Captivi, Trinummus, Rudens*

The main objects will be to appreciate Roman comedy, to show its relation to modern comedy, and to acquire a feeling for Latin as a spoken language. *Professor HARKNESS.*

Three hours. Second semester. Elective for Sophomores. *Mon., Wed., Fri., at 12.25.*

[5, 6. *Latin Poetry*]

Aims to give a connected and comprehensive view of the history and development of Latin poetry. Lectures on the lives and writings of the authors; reading of characteristic selections; special study, by members of the class, of assigned topics in literary history and criticism. First semester: Plautus. Second semester: Lucretius and Catullus. Forms with 7, 8 a two-year consecutive course, affording a general survey of Roman literature.

Three hours. Through the year. Elective for Juniors and Seniors. Either semester may be elected independently. Not offered in 1920-21.

7, 8. *Latin Prose*

Aims to give a connected and comprehensive view of the history and development of Latin prose. Lectures on the lives and writings of the authors, on the development of oratory, etc.; reading of characteristic selections; special study, by members of the class, of assigned topics in literary history and criticism. First semester: specimens of early Latin, Cicero's *Brutus*, and Quintilian. Second semester: the *Annals* of Tacitus. Forms with 5, 6 a two-year consecutive course, affording a general survey of Roman literature. Professors HARKNESS and GREENE.

Three hours. Through the year. Elective for Juniors and Seniors. Either semester may be elected independently.

[11, 12. *Latin Composition*]

One hour. Through the year. Elective for Sophomores, Juniors, and Seniors. Not offered in 1920-21.

13, 14. *History of the Roman Empire*

The Early Empire; the Age of the Antonines; the Age of Constantine. Professor GREENE.

Three hours. Through the year. Elective for Sophomores, Juniors, and Seniors. Either semester may be elected independently. Tu., Th., Sat., at 9.25.

16. *Roman Civilization*

An outline of Roman civilization and its influence on modern times. Special attention will be given to the literature and to the political and social life. No knowledge of Latin required. Must be preceded or followed by Greek 15, Greek Civilization. The two semesters to-

gether constitute the required course in Classical Civilization. *Professors HARKNESS and GREENE.*

Three hours. First or second semester. Required in the Freshman or Sophomore year of candidates for the degree of Bachelor of Philosophy. Not elective. *1st division, Mon., Wed., Fri., at 9.25; 2d division, Mon., Wed., Fri., at 11.25.*

[17, 18. *Seminary in Latin*]

Subject for 1920-21: Reading from the poetry of the Empire. Gude-
man's *Latin Literature of the Empire*, vol. II. Questions in textual criti-
cism and in the structure of Latin verse will be considered.

Three hours. Two hours of attendance. Through the year. Elective for Grad-
uates. Not offered in 1920-21.

XX. ROMANCE LANGUAGES AND LITERATURES

COURTNEY LANGDON, A.B., *Professor of the Romance Languages and
Literatures*

ALBERT BUSHNELL JOHNSON, A.M., *Associate Professor of the Ro-
mance Languages and Literatures*

CHARLES HERMAN HUNKINS, DR. UNIV. PARIS, *Associate Professor of
the Romance Languages and Literatures*

EDOUARD R. MASSEY, A.M., B. ÈS LETTRES, *Assistant Professor of
the Romance Languages and Literatures*

ALBERT EDWARD RAND, PH.D., *Instructor in French*

CHARLES LESTER SCANLON, *Assistant in Spanish*

RICHARD NELSON THOMPSON, A.B., *Assistant in Spanish*

FRENCH

1, 2. *Elementary French, First Year*

Grammar, composition, dictation, conversation; translation of selec-
tions from modern authors into idiomatic English. *Dr. RAND and Mr.
MILLER.*

Three hours. Through the year. Elective for students who have not presented
French for admission. *1st division, Mon., Wed., Fri., at 8; 2d division, Tu., Th.,
Sat., at 8.*

3, 4. *Elementary French, Second Year*

Reading of easy modern French prose in the form of stories, plays, or
historical or biographical sketches; review of grammar; composition

and conversation based upon the texts read. *Professor HUNKINS and Dr. RAND.*

Three hours. Through the year. Elective for students who have credit for 1, 2 or who have presented elementary French (1 year) for admission. *1st division, Mon., Wed., Fri., at 8; 2d division, Tu., Th., Sat., at 8.*

5, 6. *Intermediate French*

Reading of modern and classical authors; review of grammar; composition and conversation based upon the texts read; dictation. *Professors HUNKINS and MASSEY, Dr. RAND.*

Three hours. Through the year. Elective for students who have credit for 3, 4 or who have presented elementary French (2 years) for admission. *1st and 3d divisions, Tu., Th., Sat., at 9.25; 2d division, Mon., Wed., Fri., at 9.25.*

7, 8. *Advanced French*

An introduction to classical and modern French literature; composition; conversation based on the texts read; dictation. *Professors HUNKINS and MASSEY, Dr. RAND.*

Three hours. Through the year. Elective for students who have credit for 5, 6 or who have presented intermediate French for admission. *1st and 3d divisions, Mon., Wed., Fri., at 9.25; 2d division, Tu., Th., Sat., at 11.25.*

9, 10. *The Realistic School*

Flaubert, Augier, the younger Dumas, the Goncourts, Daudet, Zola, Taine, Loti, and others; abstracts, in French, of works read outside the class; sight reading a prominent feature. The course will be conducted largely in French. *Professor HUNKINS.*

Three hours. Through the year. Elective for students who have credit for 7, 8. *Mon., Wed., Fri., at 10.25.*

[11, 12. *The Romantic School*]

The history of the romantic school; reading of authors from Chateaubriand and Victor Hugo to Balzac; abstracts of works read outside the class. The course will be conducted largely in French.

Not offered in 1920-21.

23, 24. *Practice in Writing and Speaking French*

Intended especially for those preparing to teach. Written and oral

translations from English into French. Conversation; dictation; phonetics. *Professor MASSEY.*

Three hours. Through the year. Elective for students who have credit for 7, 8. *Tu., Th., Sat., at 11.25.*

27, 28. *French Literature and Civilization*

An interpretation of French culture as seen in its literature, history, religion, and philosophy. *Professor LANGDON.*

Three hours. Through the year. Elective for students who have credit for 5, 6. *Tu., Th., Sat., at 10.25.*

ITALIAN

1, 2 (17, 18). *Elementary Italian, First Year*

Grammar, composition, and reading of modern authors. *Professor LANGDON.*

Three hours. Through the year. Elective for Juniors and Seniors, and for Sophomores not electing more than one other modern language. *Mon., Wed., Fri., at 9.25.*

9, 10 (19, 20). *Dante in English*

A study of the whole of the *Divina Commedia* in English, in the light of modern thought and of other world-poems. *Professor LANGDON.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. Students are advised to elect this course in their Senior year. *Mon., Wed., Fri., at 11.25.*

SPANISH

1, 2 (15, 16). *Elementary Spanish, First Year*

Grammar, conversation, composition, and reading of modern authors. *Professor JOHNSON, Messrs. SCANLON and THOMPSON.*

Three hours. Through the year. Elective for Juniors and Seniors, and for Sophomores not electing more than one other modern language. *1st division, Tu., Th., Sat., at 9.25; 2d division, Tu., Th., Sat., at 11.25; 3d division, Tu., Th., Sat., at 9.25; 4th division, Mon., Wed., Fri., at 10.25.*

2 (16 R)

A continuation of 15 R, with which it constitutes one year of the language. *Mr. SCANLON.*

Three hours. First semester. Elective for students who have credit for 15, or 15 R, or 101, 102 (1918-19). *Mon., Wed., Fri., at 10.25.*

3, 4 (21, 22). *Elementary Spanish, Second Year*

Reading of modern authors; review of grammar; composition; conversation. *Professor JOHNSON.*

Three hours. Through the year. Elective for students who have credit for 15, 16 or who have presented elementary Spanish (1 year) for admission. *Mon., Wed., Fri., at 11.25.*

5, 6 (25, 26). *Intermediate Spanish*

Reading of modern authors, with special attention to South America. Composition, conversation. *Professor JOHNSON.*

Three hours. Through the year. Elective for students who have credit for 21, 22 or who have presented elementary Spanish (2 years) for admission. *Mon., Wed., Fri., at 10.25.*

7, 8. *Spanish Literature of the Golden Age*

Selections from Cervantes, Lope de Vega, Calderon, and others; abstracts of works read outside the class. The course is conducted largely in Spanish. *Professor JOHNSON.*

Three hours. Through the year. Elective for students who have credit for 5, 6 (25, 26) or who have presented intermediate Spanish for admission. *Tu., Th., Sat., at 10.25.*

XXI. SOCIAL AND POLITICAL SCIENCE†

JAMES QUAYLE DEALEY, PH.D., § *Professor of Social and Political Science*

JOHN CORLISS DUNNING, LL.B., PH.D., *Assistant Professor of Political Science*

HAROLD STEPHEN BUCKLIN, PH.D., *Assistant Professor of Social Science*

DANIEL HARRISON KULP, A.M., *Lecturer in Social Science*

SOCIAL SCIENCE‖

1. *Social Science*

An introductory study of the main subjects considered in sociology with illustrations based on social conditions in the United States. Professors DEALEY and BUCKLIN.

Three hours. First and second semesters. Elective for Sophomores, Juniors, and Seniors. First semester, *Tu., Th., Sat., at 10.25*; second semester, *Mon., Wed., Fri., at 12.25*.

2 (formerly 4). *Modern Social Problems*

An analysis of the problems of poverty and crime; accompanied by study of the philosophy and methods of private and public agencies dealing with them. Lectures, assigned readings, individual observation and investigation. Professor BUCKLIN.

Three hours. Second semester. Elective for Sophomores, Juniors, and Seniors. *Tu., Th., Sat., at 10.25*.

3. *Modern Social Problems*

An analysis of the problems of health, immigration, and child welfare; accompanied by a study of typical community activities in the

‡ Candidates for the degree of Bachelor of Arts or Bachelor of Philosophy are required to take in the Sophomore or Junior year a year course in the departments of Economics and Social and Political Science. This requirement may be met by Economics 1, 2; or Social Science, 1, 2; or Political Science 1, 2; or a semester course in each of any two of these subjects.

Candidates for the degree of Bachelor of Science are required to take in the Sophomore year Economics 1 and either Political Science 1 or Social Science 1.

Attention is called to related courses in the following departments: Geology 6, Principles of Economic Geography; Mathematics 54, Mathematical Theory of Statistics.

§ On leave of absence during the second semester 1920-21.

‖ The advanced courses in Social Science are elective for students who have credit for Social Science 1 or 2. Semester courses in this department may be elected independently unless otherwise stated.

field of social reform; class visits to institutions, and descriptive talks by workers in local organizations. *Professor BUCKLIN.*

Three hours. First semester. Elective for Graduates, and for Undergraduates who have credit for 1 or 2. *Mon., Wed., Fri., at 12.25.*

5. *Social Institutions*

A survey of the fundamental social institutions, and a study of the development and trend of the most important of these. *Mr. KULP.*

Three hours. Second semester. Preceded in the first semester by 3. Elective for Graduates, and for Undergraduates who have credit for 1 or 2. *Mon., Wed., Fri., at 12.25.*

7. *Sociology and Education*

A consideration of sociological teachings applicable to education. The School as a social institution and as an agency in social control and social adaptation. A study of the relation of the public school to the field of social reform. *Professor BUCKLIN.*

Three hours. First semester. Followed in the second semester by 8. Elective for Seniors, Graduates, and candidates for the degree of Bachelor of Education. *Mon., Th., 4.30 to 6.*

8. *Sociology and Education*

A consideration of sociological principles applicable to school administration, discipline, curriculum building, class-room technique, and supervision of student activities. The main emphasis will be placed on primary and secondary education. Discussions and reports on special studies covering experiments in this field. *Mr. KULP.*

Three hours. Second semester. Preceded in the first semester by 7. Elective for Seniors, Graduates, and candidates for the degree of Bachelor of Education. *Mon., Th., 4.30 to 6.*

9, 10. *The Social Survey*

A study of typical surveys in the fields of health, education, industry, charities, corrections, housing, mental hygiene, recreation, child welfare, and rural problems. During the year the class will make a coöperative survey of local provisions in several of the above fields. *Professor BUCKLIN.*

Three hours. Through the year. Elective for Graduates, and for Undergraduates who have credit for 1 or 2. *Mon., Wed., Fri., at 10.25.*

15. *Sociology*

Its fundamental teachings; principles underlying the development of society and its great social institutions; applications of these principles to the theory of social progress. A survey of the constructive trend in modern civilization. *Professor DEALEY.*

Three hours. First semester. Followed by 16 in the second semester. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 9.25.*

16. *Social Psychology*

Psychological principles underlying social order and progress; social suggestion and imitation; the psychology of social groups; applications of the principles of social psychology to modern social problems. *Mr. KULP.*

Three hours. Second semester. Preceded in the first semester by 15. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 9.25.*

[11, 12. *Seminary in Sociology*]

First semester: a study of ancient and medieval teachings relating to society and social progress; the great precursors of sociology in the eighteenth century. Second semester: a survey of the chief sociological systems set forth since the beginning of the nineteenth century, and the influence exerted by these on the life and institutions of modern society. Contemporary social theories.

Not offered in 1920-21.

[13, 14. *Social Research, Investigation, and Field Work*]

Study and practice in methods of gathering, interpreting, and presenting data of social problems and movements; investigation of agencies and institutions dealing with social problems; field work with the coöperation of selected local agencies and institutions, accompanied by a study of the principles of case work.

Three hours. Through the year. Five to eight hours of research or field work and one hour of class-room discussion. Must be preceded or accompanied by Social Science 3, 4 or Social Science 9, 10. Elective for Graduates and for a limited number of approved Juniors and Seniors. Hours to be arranged with the instructor. Not offered in 1920-21.

POLITICAL SCIENCE ‡

1. *Political Science*

An introductory study of the main subjects considered in Political Science, with illustrations based on the local and national governments of the United States. *Professors DEALEY and DUNNING.*

Three hours. First semester. *1st division, Tu., Th., Sat., at 10.25; 2d division, Mon., Wed., Fri., at 12.25.*

2 (formerly 5). *Governments and Politics of Foreign States*

A study of comparative government and political development. Problems of world-politics. During the year 1920-21 special attention will be given to political geography and to the many political reorganizations resulting from the World War. *Professor DUNNING.*

Three hours. Second semester. Preceded in the first semester by 1. Elective for Undergraduates. *Tu., Th., Sat., at 10.25.*

3, 4. *Government and Politics of the United States*

First semester: national government, its organization, powers, and methods; current political issues. Second semester: municipal governments; framework and activities of European and American municipalities. *Professor DUNNING.*

Three hours. Through the year. Elective for Juniors, Seniors, and Graduates. *Mon., Wed., Fri., at 9.25.*

6, 12. *International Law and Diplomacy*

A study of international relations. National policy as shown in diplomatic intercourse and in hostilities to which the United States has been a party. Present national diplomatic problems, including those of the Latin-American States. International rights and obligations of citizens and resident aliens. *Professor DUNNING.*

Three hours. Through the year. Seminary course elective for Graduates and for a limited number of approved Undergraduates. *Mon., Wed., Fri., at 10.25.*

7. *Jurisprudence and Business Law*

An analysis of the fundamental concepts of the science of law with special application to mercantile and commercial transactions; the

‡ The advanced courses in Political Science are elective for students who have credit for 1 or 2. Semester courses may be elected independently unless otherwise stated.

historical development of Roman and English legal systems. *Professor DUNNING.*

Three hours. First semester. Followed in the second semester by 11. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 9.25.*

11. *Corporation Law*

A study of the legal structure, functions, and powers of Corporations and Partnerships. The course will emphasize the legal relations of the component parts of quasi-public and private corporations to one another and to the public, and will give especial attention to the laws and agencies of regulation and control. *Professor DUNNING.*

Three hours. Second semester. Preceded in the first semester by 7. Elective for Juniors, Seniors, and Graduates. *Tu., Th., Sat., at 9.25.*

[8. *Constitutional Law*]

Principles and development of American constitutional law. Case system.

Not offered in 1920-21.

[9, 10. *Seminary in Political Science*]

A study of ancient and modern political theories. Rise of modern democratic principles. Present theories in respect to the state; its origin, sovereignty, and forms of government. Relation of these theories to the practical problems arising from the World War.

Three hours. Through the year. Elective for Seniors and Graduates. Not offered in 1920-21.

13, 14. *Investigation of Special Topics*

Intended to train students in methods of gathering and presenting data in the study of political problems. In connection with this course, work in comparative legislation may be taken under the direction of the Legislative Reference Bureau of the State Library. *Professor DUNNING.*

Three hours. Six to nine hours of investigation and class-room work. Through the year. Elective for Graduates, and for a limited number of approved Seniors. Hours by arrangement.

XXII. PHYSICAL TRAINING ‡

FREDERICK WILLIAM MARVEL, Ph.B., *Professor of Physical Training*

LESLIE EARL SWAIN, A.M., *Instructor in Physical Training*

GEORGE FRANKLIN HERRICK, *Assistant in Physical Training*

ROSS ELMER BROWNING, *Assistant in Physical Training*

From Thanksgiving to the Spring Recess, all first and second year men are required to attend gymnasium exercises three times a week. The particular course will be assigned by the department.

Military Setting-up Exercises

For discipline, posture, coördination, and alertness. Games. *Professor MARVEL.*

Setting-up Exercises and Gymnastic Dancing

The work also includes the use of wooden and iron dumb-bells, indian clubs, bar bells, wands, and floor exercises. *Mr. BROWNING.*

Two divisions.

Swimming

Elementary, advanced, and competitive. Life saving, resuscitation, and games. *Mr. SWAIN.*

Required during the fall and spring, of all first year men who are unable to pass the test and of all other men who have not previously passed the test. Eight divisions. Three hours.

Boxing

Mass and Shadow Boxing similar to that taught in the Army and Navy. After the students become familiar with the blows, blocks, parries, and foot work they are paired off against each other. Accuracy and correct form are insisted upon. Boxing for points rather than hard blows is the aim.

Three divisions.

Wrestling

Elementary, advanced, and competitive. *Mr. HERRICK.*

Three divisions.

‡ No charge is made for instruction in any branch of gymnastics or athletics.

Track Athletics

Elementary, advanced, and competitive. *Mr. HADDLETON.*
Three divisions.

Heavy Gymnastics

Elementary and advanced. *Mr. BROWNING.*

Handball

Mr. BROWNING.

ORIENTATION LECTURES

Lectures upon the scope and aims of college education by administrative officers and members of the Faculty.

The object of the course is to explain to the new students the organization and administrative system of the University; to instruct them concerning the general content of the academic curriculum; to describe the libraries, laboratories, and other facilities for study; to offer general advice regarding methods of study and the preservation of health; and to discuss the relation of the social organizations to the University and the students. The lectures will define and describe the general subjects of the curriculum, such as literature and language, art, philosophy, and the various sciences; discuss their relations to one another; and attempt to determine their intellectual, moral, esthetic, and vocational values.

RELIGIOUS EDUCATION

C*COURSES arranged for the training of directors of Religious Education in churches and allied organizations, lay assistants of pastors, teachers of the Bible, and other leaders in religious work.*

The growing demand for trained leaders in the work of religious education has led Brown University to arrange a special two-year course of study designed to meet the needs of mature men and women who may not be able to undertake a full degree course. Such persons will be received as special students in the University, provided their previous training has fitted them to pursue the various courses outlined below. On the successful completion of the two-year course a certificate will be awarded by the University. Those who are engaged in other occupations for a portion of their time may take a part of the work each year, completing the entire course in a longer period than two years. Regular undergraduate and graduate students may elect these courses.

FIRST YEAR

Old Testament Literature and History. *Biblical Literature and History 15, 16.*

Biblical Seminary. *Biblical Literature and History 21, 22.*

Outlines of Economics. *Economics 1.*

History or Principles of Education. *Education 1 or 2.*

History of Christianity. *History 3, 4.*

Outlines of Social and Political Science. *Social Science 1, Political Science 1.*

Training Course for Religious Service. Special course, not counted toward a degree.

SECOND YEAR

New Testament Literature and History. *Biblical Literature and History 17, 18.*

Psychology of Education. *Education 3.*

Ethics. *Philosophy 4.*

Philosophy of Religion. *Philosophy 9.*

History of Religion. *Biblical Literature 30, Philosophy 30.*

Modern Social Problems. *Social Science 3, 5.*

Social Investigation and Training. *Social Science 13, 14.*

The above course is not intended to be absolutely fixed; substitutions may be made to meet individual needs and, in some cases, the courses prescribed will be interchanged between the two years.

The University makes arrangements with leading churches, and with the Providence Christian Associations, the Rhode Island Sunday School Association, and the Society for Organizing Charity, for coöperation in the practical training of students in religious and social service as the needs of individual students dictate.

LIBRARIES, LABORATORIES, AND MUSEUMS

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THE UNIVERSITY LIBRARY

HARRY LYMAN KOOPMAN, A.M., LITT.D., *Librarian*

FRANCIS K. W. DRURY, A.M., B.L.S., *Assistant Librarian*

THE libraries of the University contain two hundred and eighty-five thousand volumes. The MAIN LIBRARY is constantly increased with reference to the different courses of study, while at the same time there is kept in view the development of a library of general culture. It includes eight special libraries. The first is the Harris Collection of American Poetry, founded by Albert G. Greene, of the class of 1820, extended by C. Fiske Harris, and bequeathed to the University by the Hon. Henry B. Anthony, of the class of 1833, which numbers over twenty-seven thousand volumes. It is the largest collection in the world devoted to the subject, and is rapidly growing; a fund of ten thousand dollars given by Samuel C. Eastman, of the class of 1857, in memory of the founder of the collection, provides for its regular increase. The second is the Rider Collection of Rhode Island History, formed by Sidney S. Rider and presented to the University by Marsden J. Perry, a collection remarkable for the extent and rarity of its manuscript and printed material bearing on the history of the state. The third is the Wheaton Collection of International Law, given by William V. Kellen, of the class of 1872, in honor of Henry Wheaton, of the class of 1802. This collection already numbers over sixteen hundred volumes. The fourth is the George Earl Church Collection, the bequest of Colonel Church, consisting of thirty-five hundred volumes, many of them of great rarity, on the geography, history, and development of South America. The fifth is the Corthell Engineering Library, containing seven thousand volumes and pamphlets. This collection is particularly rich in works on river and harbor engineering. A fund of five thousand dollars given with the collection by the founder, Elmer L. Corthell, of the class of 1867, provides for its increase. The sixth is the Chambers Dante Collection, containing eleven hundred volumes besides many rare pamphlets, given by Henry D. Sharpe, of the class of 1894. The seventh is the private library of the late Professor Lester F. Ward, numbering one thousand volumes, relating especially to sociology and paleobotany. It was given by his family. The eighth is the Walter C. Hamm Collection of Newspaper Clippings, some 200,000 in number, chiefly in the field of politics and sociology, presented by Mr. Hamm, a member of the class of 1870.

On the floor of the stack which opens off the reading room has been placed

a special collection known as the **STUDENTS' LIBRARY**, which consists of some seventeen thousand volumes selected for the use of undergraduates. To this floor all students have free access. The other floors of the stack are open regularly to the Faculty, and to students by special permission.

Early in the academic year the Assistant Librarian gives a lecture to the Freshmen on the use of the Library. Then on successive days he meets groups of the class in the reading room and gives them practical illustrations of the use of the reference books and the catalogue, the character of the Students' Library, and the methods of borrowing and returning books, and in general introduces them to their privileges and obligations connected with the Library.

The library is open during term time from 8.30 a.m. to 10 p.m. on week days, and from 2 to 10 p.m. on Sundays; during vacations on week days, from 9 a.m. to 5 p.m.

THE JOHN CARTER BROWN LIBRARY

THE **JOHN CARTER BROWN LIBRARY**, with the building erected for its use, was given to the University by the trustees under the provisions of the will of the late John Nicholas Brown, of the class of 1885. This collection, known as the most valuable library of Americana in the United States, was begun by John Carter Brown, of the class of 1816, and after his death was enlarged by his widow and by his sons, John Nicholas and Harold Brown. It possesses more than twenty-five thousand volumes in print and in manuscript relating to North and South America during the Colonial period, including rare and unique maps. The library may be used by properly qualified students or investigators. The building is open from 9 a.m. to 5 p.m. on week days, except on Saturdays, when it closes at 1 o'clock.

DEPARTMENT LIBRARIES

THE **GERMANIC DEPARTMENT LIBRARY** comprises over eight thousand volumes relating to German literature, philology, and history. The rooms, Sayles 6 and 7, are open daily from 9.20 a.m. to 12.30 p.m., and from 2.30 to 4.30 and 7.45 to 9 p.m., except Wednesday and Saturday.

THE **ENGLISH DEPARTMENT LIBRARY** comprises about thirty-two hundred volumes, of which more than twenty-seven hundred came from the private library of the late Hammond Lamont, Professor of Rhetoric in Brown University from 1895 to 1900. The library is in the English Seminary rooms, in the John Hay Library.

THE **LIBRARIES OF THE DEPARTMENTS OF GREEK AND LATIN** constitute the Albert Harkness Classical Seminary, named in honor of its founder, the late Professor Albert Harkness. It comprises fifteen hundred volumes. It is contained in Sayles 8.

THE ROMANCE DEPARTMENT LIBRARY comprises about sixteen hundred volumes. The room, Sayles 4, is open Monday, Wednesday, and Friday, from 10.20 a.m. to 12.20 p.m.; Tuesday, Thursday, and Saturday, from 11.20 a.m. to 12.20 p.m.; also usually evenings.

THE BIBLICAL DEPARTMENT LIBRARY comprises sixteen hundred volumes. The room, Sayles 3, is open from 9.20 a.m. to 12.30 p.m., and from 2 to 5 and 7 to 9 p.m., except Saturday afternoon and evening.

THE BIOLOGICAL DEPARTMENT LIBRARY comprises twenty-seven hundred bound periodicals, about twenty-two hundred other books, and about three thousand pamphlets. Eighty-four current periodicals are regularly received. The rooms, in the Arnold Biological Laboratory, are open from 9 a.m. to 12 m., and from 2 to 5 p.m., except Wednesday and Saturday afternoons.

THE SCHOOL OF EDUCATION LIBRARY comprises about thirty-five hundred volumes, among them a special collection of recent text-books. It occupies rooms in the School of Education Building, 81 Waterman Street, and is open from 9 a.m. to 5 p.m. week days, except Saturday afternoon.

THE LIBRARY OF THE DEPARTMENT OF ECONOMICS comprises about seventeen thousand volumes and fifty thousand pamphlets, and receives regularly one hundred and fifty periodicals. The rooms are on the first floor of the old University library building, and are open from 9 a.m. to 5.30 p.m., except Saturdays, when the hours are from 9 a.m. to 1 p.m.

THE BOTANICAL DEPARTMENT LIBRARY comprises about twenty-three hundred bound volumes, about six thousand pamphlets, and ninety-two current periodicals. The library is in Maxcy Hall, E, with reading room in Maxcy 5, open generally all day.

THE LIBRARY OF THE DEPARTMENT OF PHYSICS comprises files of the leading periodicals and a collection of standard works and monographs in all departments of Physics. The room, in Wilson Hall, is open daily.

THE MATHEMATICAL DEPARTMENT LIBRARY comprises ten hundred and sixty-five volumes of mathematical journals and twenty-nine hundred and fifty other books, and receives regularly eighty-five current periodicals, including the most important publications in the English, French, German, Swedish, Danish, Norwegian, Japanese, Spanish, and Dutch languages. Application for use of the library should be made to the librarian, Professor Archibald. The library room is Wilson 27; officers of the department are usually in Wilson 28 or Wilson 19 between 8 a.m. and 5 p.m.

THE LIBRARY OF THE DIVISION OF ENGINEERING comprises about seventeen hundred bound periodicals, and sixteen hundred other books. Eighty engi-

neering periodicals are regularly received. Its rooms, on the second floor of the Engineering Building, are open from 8.30 a.m. to 12.30 p.m., and from 2 to 5 p.m., week days; on Saturdays from 8.30 a.m. to 12.30 p.m. It is supplemented by the Corthell Library, already described.

THE LIBRARY OF THE DEPARTMENT OF GEOLOGY comprises more than three thousand volumes together with a large collection of charts and maps. The more important geologic, geographic, and mining periodicals are regularly received. The library is contained in Rhode Island Hall, and is open from 9 a.m. to 5 p.m.

THE LIBRARY OF THE DEPARTMENT OF CHEMISTRY comprises about eleven hundred volumes, including sets of the leading chemical periodicals. The room is in Rogers Hall, and is open from 9 a.m. to 1 p.m., and from 2.15 to 5 p.m., except Saturdays.

OTHER DEPARTMENT LIBRARIES. There are several other special collections of books for seminary and advanced laboratory work. The most important of these belong to the departments of Astronomy, History, Philosophy, and Social and Political Science.

OTHER PROVIDENCE LIBRARIES

There are at the service of the students of the University the seven collections of books named below. These comprise, with the University Library, over seven hundred thousand volumes, exclusive of pamphlets and manuscripts.

THE PROVIDENCE PUBLIC LIBRARY offers to all students of Brown University, upon the same conditions as to other residents of the city, the use of its collection of more than two hundred thousand volumes. About fourteen hundred periodicals are currently received. The Information Desk may be consulted with reference to any department of University study. The library is situated at the corner of Washington and Greene Streets. Its principal rooms are open regularly from 9 a.m. to 9 p.m.; on Sundays, from 2 to 9 p.m.

THE LIBRARY OF THE PROVIDENCE ATHENAEUM is a collection of general literature numbering ninety-five thousand volumes. It receives over two hundred papers and magazines. It is especially rich in sets of periodicals and in books on art. Professors or teachers may become annual subscribers on the payment of five dollars in advance, and any duly accredited student of Brown University may become a subscriber for three months on the payment of one dollar; but the rights of such subscribers are personal only and do not extend to their families. The Athenaeum is open on week days, from 8.30 a.m. to 6.30 p.m.; on Saturdays from 8.30 a.m. to 9 p.m.

THE LIBRARY OF THE RHODE ISLAND HISTORICAL SOCIETY is situated on Waterman Street, next to the old University Library Building. It comprises forty

thousand bound volumes, fifty thousand pamphlets, and two hundred thousand manuscripts, and by the courtesy of the society is accessible, free of charge, to members of the University. It is open on week days, from 9 a.m. to 4 p.m.

THE ANNMARY BROWN MEMORIAL, situated on Brown Street south of the University grounds, was founded by General Rush C. Hawkins, of New York, in memory of his wife, Annmary Brown, of Providence, a granddaughter of Nicholas Brown, after whom the University was named. It contains a collection—one of the most complete in the world—of books from the first European presses showing the progress of printing through the first half century of its existence, from about 1450 to 1500. It contains also a notable collection of paintings. In connection with the Memorial, General Hawkins has provided for two lectures on "The Function of the Arts in Civilization," to be given annually in Sayles Hall, on March 9 and October 28, the birthdays of his wife and her sister, Carrie Mathilde Brown Bajnotti. The library is open to the public Tuesday to Friday, from 10 a.m. to 4 p.m.

THE LIBRARY OF THE RHODE ISLAND MEDICAL SOCIETY occupies a building of its own on Francis Street, opposite the State House. It comprises about twenty-five thousand volumes upon medical science, including current medical periodicals. Upon application students may, without cost, enjoy its privileges. The library is open on week days, from 9 a.m. to 5.30 p.m.; except on Saturdays, when it closes at 12 m.

THE STATE LAW LIBRARY is a collection of forty-five thousand volumes, and for certain lines of University study is invaluable. University students are requested to introduce themselves at the desk. The rooms of the library are in the Providence County Court House, at the corner of Benefit and College Streets, and are open on week days, from 9 a.m. to 5 p.m.; except on Saturdays, when they close at 3 p.m.

THE STATE LIBRARY, located in the State House, contains official documents of the United States and of the several states, and general works pertaining to history, political science, and social science. The Legislative Reference Bureau conducted by the State Library directs the work of students who are investigating topics in comparative legislation. The library is open to the public on week days, from 9 a.m. to 4 p.m.; except on Saturdays, when it closes at 12 m.

LABORATORIES

THE LADD ASTRONOMICAL OBSERVATORY contains an equipment available for illustrating the general courses in astronomy and for practical use in the applied courses. During the college year the Observatory is open to the public on one or more evenings a month.

THE PHYSICAL LABORATORY is in Wilson Hall, which was specially designed and constructed for the Department of Physics. Six laboratory rooms are available for experimental study. There is a large collection of apparatus and historical and other photographs, lantern-slides, and cage models illustrating the propositions in pure and applied physics.

THE CHEMICAL LABORATORIES are in Rogers Hall, which was erected expressly for the Department of Chemistry. The inorganic laboratory is supplied with tables and lockers for about two hundred and fifty students. The organic laboratory is fitted with tables for about fifty students.

THE GEOLOGICAL LABORATORIES AND MUSEUM are in Rhode Island Hall. They are equipped with apparatus, photographs, maps, models, and illustrative specimens for work in general geology, geography, mineralogy, and petrography. The region in which the University is situated provides unusual opportunities in a small compass for the study of both simple and complex problems in field research in petrographic, metamorphic, paleontologic, and stratigraphic geology.

THE BIOLOGICAL LABORATORIES for subjects other than Botany are in the Arnold Biological Laboratory. In this building are separate laboratories for General Biology, Comparative Anatomy, Embryology and Histology, Physiology and Bacteriology; several special laboratories and research rooms; and the Biological Department Library. On account of close relations with the Providence Health Department, the Rhode Island Hospital, the Providence City Hospital, and the Rhode Island Shell-fish Commission, and on account of the location of Providence at the head of Narragansett Bay, the laboratory is peculiarly favored in the matter of material for study. The department has official connection with the Woods Hole Station of the United States Bureau of Fisheries and the Biological Laboratory at Cold Spring Harbor.

THE BOTANICAL LABORATORIES are in Maxcy Hall, on the first floor. There is also a greenhouse for experimental work adjoining the building. The Herbarium, in an adjoining room, is accessible to advanced students in forestry and medicinal and systematic botany.

The Botanical Garden is located about one mile north of the University, at the corner of Morris Avenue and Sessions Street. A part of the Garden is being developed into an arboretum.

THE PSYCHOLOGICAL LABORATORY occupies rooms on the first floor of Rhode Island Hall. The equipment suffices for class demonstrations, for the more usual forms of psychological investigation and training in methods, and for many forms of original research.

THE ENGINEERING LABORATORIES and drafting rooms are situated in the Engineering Building.

The materials laboratory contains 40,000-pound and 50,000-pound Riehle universal testing machines; a 50,000-inch-pound Olsen torsion testing machine; complete apparatus for making physical tests on cements and concretes, including two Riehle cement testing machines; and a collection of extensometers and other small apparatus necessary to the work of the laboratory.

The steam and gas engineering laboratory contains a 10-inch and 18-inch by 30-inch cross-compound condensing Harris-Corliss engine equipped with a Wheeler surface condenser and the necessary pumps, a 20-kilowatt De Laval turbo-generator set, a vertical Sturtevant steam engine direct connected to a 5-kilowatt generator, a 40-horse-power 4-cylinder Garford automobile engine, a 24-horse-power 3-cylinder Chase marine engine, an 8-horse-power Fairbanks horizontal gas engine, two air compressors, injectors, and miscellaneous smaller apparatus. The equipment also includes a manograph, indicators, transmission dynamometers, and other apparatus necessary for making complete tests. The central heating plant of the University, containing return tubular boilers of 450 boiler-horse-power capacity and a 110-horse-power Babcock and Wilcox water tube boiler, is used for tests and investigations. For such tests the department possesses apparatus for analyzing flue gas, pyrometers, steam calorimeters, etc.

The hydraulic laboratory contains a 1000-gallon Fales & Jenks rotary fire pump driven by the Harris-Corliss engine, a D'Auria steam pump, pulsometer, Pelton wheel, Humphrey inward flow turbine, hydraulic ram, Venturi meters of different sizes, weirs and measuring tanks, together with the necessary auxiliary apparatus.

The equipment further includes an Emerson bomb calorimeter, jar mill, and complete apparatus for making proximate analyses of fuels; Macbeth illuminometer; equipment for testing lubricating and fuel oils, including Tagliabue viscosimeter; a complete metallurgical microscope; and polishing and photographic apparatus for investigating the nature and structures of alloys.

There is provided a complete equipment of apparatus necessary for the field work in surveying and railroad engineering. For the work in structural engineering a collection of over 400 photographs, 500 large blue prints of bridges, buildings, roof trusses, etc., and a set of steel structural shapes and iron beam-hangers are provided.

The electrical laboratory is well equipped with the necessary motors, generators, measuring instruments, storage batteries, etc.

THE ENGINEERING SHOPS are situated in Rogers Hall. They are equipped with all the necessary tools for instruction in wood-working and metal-working, and with a forge and gas furnaces for exercise in tool dressing and in hardening, tempering, and heat-treating steel.

MUSEUMS

THE HERBARIUM is in Maxcy Hall. The general collection contains upwards of eighty thousand specimens from all parts of the world, but mainly from America. The cryptogams occupy ten cases and the seed-plants thirty. All of these are mounted and systematically arranged according to Engler and Prantl's *Natürliche Pflanzenfamilien*. There are also several cases of unmounted specimens and duplicates. The genus *Carex* is particularly well represented, as it was the object of much special study by Colonel S. T. Olney, the founder of the Herbarium.

THE MUSEUM OF FINE ARTS occupies the first floor of Manning Hall. It contains plaster casts, chiefly from works of classical sculpture, illustrating ancient history, biography, and art. It also contains some original specimens of Etruscan, Graeco-Roman, and Oriental sculpture; the George W. Harris bequest of pictures by old masters of the Italian and North European schools, and of works in marble, china, glass, bronze, and silver; and a large painting by Tintoretto, the gift of Mrs. Charles Bradley and the late George L. Bradley. Certain works in silver and china, bequeathed to the University by George W. Harris, are temporarily loaned to the Rhode Island School of Design, and are on exhibition at the museum of that school.

The University possesses a large collection of valuable portraits, which are hung in Sayles Memorial Hall. It includes portraits of the University's principal benefactors, of many of its former officers, and of other distinguished persons, Americans and foreigners. The history of Rhode Island is especially well represented.

Some paintings, selected from the collections of the University, are exhibited in the gallery on the top floor of the John Hay Library.

A series of paintings illustrating early American history, by Frank O. Small, presented to the Department of History by Samuel M. Conant, is hung in the Faculty Room in the Administration Building.

All the collections are open to the public.

UNIVERSITY EXTENSION

THE University offers each semester a number of extension courses, given at the University and open to all who desire to register. These courses are of two types.

Credit is not given toward the degree of Bachelor of Arts or Bachelor of Philosophy, or toward advanced degrees, for courses in University Extension. Class B candidates for the degree of Bachelor of Education will be allowed a

maximum credit of thirty semester hours for such courses, provided they are taken in accordance with the regulations of the School of Education. See page 74.

Single Courses—each of ten lectures or lessons, given one each week—are designed primarily for the general public. Those, however, who wish to pursue these courses for University credit may register as students. At the close of each exercise the instructor will meet these students for discussions, assignment of work, review of work previously assigned, laboratory exercises, and other pertinent matters.

Double Courses—each of about fifteen lectures or lessons, given one each week with each session for a double period, or given two each week for ten weeks—are designed primarily for those who wish to pursue them for University credit. They furnish an opportunity for more intensive work and more rapid progress than the *single courses* do. Auditors also are admitted to these courses.

A *single course* is accepted by the University as the equivalent of a one-hour course for one semester; a *double course* is accepted as the equivalent of a two-hour course. The University will issue a formal report to students who have successfully completed extension courses for credit.

A "Certificate in University Extension" will be awarded to those who successfully complete in Extension courses the equivalent of sixty semester hours of work, and they will be enrolled as "Associates in University Extension."

Applications for admission to extension courses should be sent to Professor Walter Ballou Jacobs, Director of University Extension, John Hay Library, Brown University. The application should give the full name and the address of the applicant, and the course or courses in which registration is desired. On receipt of the fee, a card of admission is issued which must be shown at the lectures in each course. Classes are not formed in any course for which fewer than twenty-five apply. The fee for single courses is three dollars and a half. For those who register for credit there will be an additional fee of one dollar and a half. This fee is due on registration and must be paid not later than the third lecture in each course. The fee for double courses is ten dollars. Auditors cards for double courses are issued for seven dollars. Checks should be made payable to Brown University. Fees should be sent with the application if possible; if not, payment may be made at the Comptroller's office, University Hall.

Courses offered during the first semester—November Series—1920-21, are:

Art and Music

Great Periods of Interior Architecture. *Dean GILMAN.*

Great Musicians from Bach to Wagner. *Professor MACDOUGALL.*

Engineering

Electrical Engineering (two courses). *Professor WATSON and Mr. TOMPKINS.*

Steam Engineering. *Professors* KENERSON and HALL, and *Mr.* CHICK.
Strength of Materials. *Professor* HALL and *Mr.* O'BRIEN.
Theory of Plane Surveying. *Professor* HILL.

European History

Types of European Radicalism. *Professor* COLLIER.

Literature and Composition

English Composition. *Professor* HASTINGS.
Spenser. The Faery Queene. *Professor* KOOPMAN.

Modern Languages

French (two courses). *Professor* MASSEY.
German. *Professor* CROWELL.
Russian. *Mr.* BELL.
Spanish. *Professor* JOHNSON.

Psychology and Education.

Psychology of Observation. *Professor* DELABARRE.
Educational Tests and Measurements. *Mr.* EKSTROM.

Science and Mathematics

Astronomy. *Professor* CURRIER.
Heredity. *Professor* WALTER.
Inorganic Chemistry. *Professor* DAVISON.
Mathematical Statistics. *Professor* BURGESS.

Social Studies

Bible; Social Teachings of the Prophets and Jesus. *Dr.* BRATCHER.
Psychiatric Social Work. *Dr.* GOSLINE and colleagues.
Recent Social Movements in the United States. *Professor* BUCKLIN.
Social Psychology. *Professor* KULP.
South America. *Mr.* HARRIS.

Readings

Selections from Contemporary Poets. *Professor* CROSBY.

PROVISIONS FOR THE PERSONAL WELFARE OF THE STUDENTS

PHYSICAL TRAINING

FOR the physical training of the students excellent opportunities are offered by the Lyman Gymnasium. It is thoroughly equipped with baths, dressing-rooms, bowling alleys, and all kinds of apparatus usually found in modern gymnasiums. Connected with the gymnasium is the Colgate Hoyt Swimming Pool, seventy-five feet in length by twenty-five feet in width, with a capacity of seventy-five thousand gallons. All the gymnasium work is under the supervision of the Professor of Physical Training, who makes a thorough examination and measurement of each student on entrance, and at other times by request. Special cases are referred to the University Physician. Such exercises are prescribed as may be necessary to give health, strength, and symmetrical development. No student is allowed to attempt any feat which is likely to result in injury. From the close of the Thanksgiving recess to the beginning of the spring recess, all first and second year students are required to attend gymnasium exercises three times a week. For other members of the University voluntary classes are provided. The class work consists of setting-up exercises, developing exercises, calisthenics, the use of clubs, dumbbells, wands, and single sticks, and general athletics. In all the work, the aim is to develop health, strength, and vitality.

During the periods before Thanksgiving and after the spring recess, or until such time as a satisfactory test is passed, swimming is required three hours a week of all Freshmen and of all other students who have not previously passed the test, unless excused by the University Physician.

All branches of athletics are under the management of the Brown University Athletic Association, and are controlled by a board of undergraduates. The Faculty Committee on Student Organizations has general oversight of the deportment and scholarship of the members of the various teams. Lincoln Field adjoins the gymnasium, and is a convenient place of exercise for the class teams and the students in general. Andrews Field, which is a mile and a half from the University, offers the usual opportunities for all the University teams. The Marston Field House, the gift of Edgar L. Marston, is fitted with dressing-rooms, lockers, baths, and other accommodations.

MEDICAL CARE

Any student suffering from illness is expected at once to visit or summon the University Physician, Dr. Raymond G. Bugbee (223 Thayer Street. Office

hours 2 to 4 p.m.; 7 to 8 p.m. Telephone Angell 2660-W.). When called to see students at their rooms, the duty of the University Physician is to make one call for diagnosis and prescription at the expense of the University. For continued attendance, students make their own arrangements with Dr. Bugbee or some other physician. All office calls are at the expense of students.

The University owns two free beds in the Rhode Island Hospital, to the occupancy of which the President of the University has the right of appointment. The first of these, THE CHARLES SMITH BRADLEY FREE BED, was established in 1872 by the payment to the hospital of four thousand dollars by the late Judge Bradley, a member of the Board of Fellows, thereby endowing a free bed "under the control of the President of Brown University for the time being, for the benefit of any officer or student of that institution who may have occasion for it." The second, THE GEORGE IDE CHACE FREE BED, was established by the payment to the hospital of four thousand dollars by the late Professor George Ide Chace; this foundation gives to the President of the University "the right to nominate and send to said hospital a patient, being a proper subject for treatment in said hospital according to the rules of the institution."

A patient sent to the hospital in accordance with the above arrangements is entitled to occupy a bed in one of the wards, and to receive the usual care, medical, surgical, and other attendance, and medicines and board, free of charge; but if he occupies a separate room and is under the care of an outside physician, he will be expected to pay the hospital from sixteen to twenty-three dollars per week.

BROWN UNION

The chief aim of the Brown Union is to encourage a vigorous and healthy social life in the University, to bring undergraduates, Faculty, and Alumni into closer relation than would otherwise be possible, and to unite under one roof, with competent direction, the various activities of the students. Membership is open to Alumni and Faculty, and includes all of the undergraduates. The Board of Management consists of the President of the Union, who must be a member of the Senior class, and four members appointed by the Corporation. The Union occupies Rockefeller Hall, which is also the headquarters of the Brown Christian Association. The building contains offices for the Athletic Board, the musical and dramatic clubs, the *Daily Herald*, and the College Bookstore; rooms of various sizes for student meetings; and the usual conveniences of a social club, including large and handsomely furnished rooms for reading and lounging, an auditorium with a well-equipped stage, a dining-hall and lunch-room, a billiard room and a barber shop. In coöperation with the Christian Association, the Union gives entertainments on Tuesday evenings throughout the year, the programs including readings, musical or dramatic performances, and addresses of various sorts. The Secretary is George J. Heidt, A.B.

BROWN CHRISTIAN ASSOCIATION

The purpose of this Association is to unite all men who cherish Christian ideals in the service of their fellow-men. It welcomes to membership all men who are connected with the University. Among its activities are frequent meetings for the discussion of religious, philanthropic, vocational, and educational problems and for devotional purposes ; the arrangement of conferences and interviews with visiting speakers ; coöperation with the churches in religious and social work. It maintains an Information Bureau for new students at the beginning of the college year. All communications relative to the Association or to the Information Bureau should be addressed to George J. Heidt, A.B., General Secretary of the Association. His offices are on the lower floor of Rockefeller Hall. Rooms M and N are specially designated for the various activities of the Association.

The University and the Christian Association coöperate in offering to the students the aid of the Employment Bureau in securing employment for undergraduates by business houses and residents of the city. Students desiring work of any kind should register with the Secretary, Mr. Heidt.

RELIGIOUS SERVICES

A chapel service is held in Sayles Hall every week day at 9 a.m. The President usually conducts the exercises. Attendance is required of undergraduates.

ARRANGEMENTS WITH OTHER INSTITUTIONS



RHODE ISLAND SCHOOL OF DESIGN

THE Rhode Island School of Design is an institution of large and increasing importance for the education of artisans and artists in the principles and processes of art, and for the general advancement of education in art by the exhibition of works of art and art studies, and by lectures. Its school buildings and museum are near the University grounds, and its collections are open daily to the public. Through its exhibitions there is opened to students an important means of culture.

The Corporation and Faculty of Brown University have agreed with the authorities of the Rhode Island School of Design upon a plan of coöperation in accordance with which certain courses at this School are open to students of the University and are counted towards a University degree. A description of these courses and a statement of the conditions under which they may be elected will be found in the list of courses given by the Department of Art, on pages 77, 78. Students from the Rhode Island School of Design are admitted to any classes in Brown University for which they are found to be prepared.

AMERICAN SCHOOL OF CLASSICAL STUDIES AT ATHENS

In 1902 a number of the friends of the University, in recognition of the sixtieth anniversary of the graduation of the late Professor Harkness, one of the founders of the American School of Classical Studies at Athens, united in contributing to the School the sum of five thousand five hundred and fifty-five dollars, to establish a fund to be known as "The Albert Harkness Fund for the Benefit of Brown University." By the establishment of this fund, the privilege of free tuition in the School is secured for all adequately prepared graduates of the University. Any who desire detailed information regarding the School may obtain it by applying to Professor Poland or Professor Allinson, members of the Managing Committee of the School.

NEWTON THEOLOGICAL INSTITUTION

The Newton Theological Institution has entered into an agreement with Brown University whereby certain work done in the University, for which a mark of *C* has been awarded, or upon which the student passes an examination satisfactory to the Faculty of the Newton Theological Institution, will

be credited toward graduation in the Theological course as follows: Biblical Literature and History 1, 2, 3, 4 (132 hours); 11, 12, 13, 14 (108 hours); 15, 16, 17, 18 (112 hours); English 11, 12 (33 hours),—in all, 385 hours. The total number of prescribed hours in the Theological course at the Newton Theological Institution is 1485.

THE TRAINING OF TEACHERS

ARRANGEMENTS WITH THE BOARD OF EDUCATION OF THE STATE OF RHODE ISLAND

THE Board of Education of the State of Rhode Island under act of the Legislature has entered into coöperation with Brown University for the professional instruction of college graduates who desire to become teachers in high schools, principals of high schools or elementary schools, or superintendents, and of those who already hold such positions. For this purpose the state appropriates annually five thousand dollars. A part of this sum is employed in maintaining graduate courses in Education. Part is expended in Scholarships in Education covering full tuition for a year of graduate work for the degree of Master of Arts. Scholarships are also granted for less than a full year of work. The courses must be approved by the head of the Department of Education. Appointment to these scholarships is made by the State Board of Education. Candidates must conform to the requirements for graduate students regularly fixed by the University.

ARRANGEMENTS WITH THE CITY OF PROVIDENCE

The School Committee of the City of Providence, by special agreement, appoints a number of student-teachers in the Providence High Schools. Appointments are made from Graduates of Brown University or of other institutions of equal rank, who have pursued undergraduate courses in Education. These student-teachers are of two types. Those of the first type—of whom there are at least four, two of each sex—are occupied in the schools each day for somewhat more than half the usual school session. They receive a salary of eight hundred dollars a year from the city. Those of the second type teach and observe about five hours a week. They have considerably more freedom in the choice of subjects and of hours than those of the first type; they receive no remuneration from the city. An unusual opportunity is thus afforded students to gain at the same time a knowledge of the theory of education and experience in the art of teaching. In making appointments to places as regular teachers of the lowest grade in the Providence High Schools, preference is given to those

who have successfully completed this course of training as student-teachers. In this respect student-teachers of the second type have the same status before the Committee as those of the first type. The practice teaching in the Providence High Schools is done under the following Supervising Teachers :

Charles E. Dennis, Ph.D., *Latin*
Harriet P. Fuller, A.M., *Latin*
Clarence H. Manchester, A.M., *English*
Edith H. Williston, A.M., *French*
Richard O. Dummer, A.M., *Physics and Chemistry*
Alden E. Hodgkins, B.S., *Mathematics*
Franklin R. Cushman, A.M., *History*
Eda M. Round, A.M., *Biology*
Irving E. Fancher, A.M., *History*
Linda M. Lowell, Ph.B., *English*

A limited number of Seniors and Graduates who are pursuing courses in Education are allowed to observe and teach in the Grammar Schools of the city in a way similar to that provided for student-teachers of the second type in the High Schools. Student-teachers are also assigned practice teaching in other schools in and near Providence.

UNIVERSITY FEES

IN EFFECT FOR ALL STUDENTS FOR THE ACADEMIC YEAR BEGINNING
SEPTEMBER, 1921

TUITION. \$100 a semester; \$200 a year. This applies to all candidates for degrees, undergraduate or graduate, whether previously in residence or new students.

GRADUATION FEES. For A.B., Ph.B., Sc.B., or B.E., \$10; for A.M. or Sc.M., \$15; for Ph.D. or D.P.H., \$25.

TOTAL PAYMENTS FOR DEGREES. All candidates for degrees (undergraduate or graduate) must pay the full amount regularly required for such degree; except that candidates receiving college credit on the basis of work done at other institutions, or of examinations for advanced standing will not be charged for work so credited.

EXTRA COURSES. Students taking extra courses, either to make up deficiencies, or as voluntary work, must pay extra tuition at the rate of \$10 per semester for each three hour course so taken; except that students completing their degree work in less than the regular time must pay at the rate of \$20 per semester for extras counted toward their degree, so that their total payments shall not be less than the amount regularly required for the degree.

SPECIAL STUDENTS (undergraduate). Students taking only one or two courses must pay tuition at the rate of \$30 per semester for each three hour course. Students taking more than two courses must pay the regular rate of \$20 per semester for each three hour course.

GRADUATE STUDENTS. Students taking less than the regular amount must pay the regular rate of \$20 per semester for each three hour course.

LABORATORY FEES. In addition to the fees mentioned above, charges are made for laboratory courses, covering the cost of ordinary supplies; special supplies and breakage are charged extra. Regular laboratory fees are as follows:

Biology: \$7 a semester for 1, 2; 3, 4; 5, 6; 7, 8; 9, 10; 12; 13, 14; 15, 16; 17, 18; 35, 36.

Botany: \$2.50 a semester for 1, 2; 20; \$7 a semester (for each three hours of credit) for 3, 4; 5, 6; 11, 12; 13, 14; fee for 7, 8 depends upon the nature of the work taken.

Chemistry: \$7 a semester for 1, 2; \$11 a semester for 3, 4; 5, 6; 7; 9; 12; 13,

14; 32; 54; \$11 a semester (for each three hours of credit) for 21, 22; 23, 24; 25, 26; 29, 30; \$19 for 8; \$4 a semester for 15, 16; 17, 18; \$22 for 53.

Civil Engineering: \$4 a semester for 31, 32.

Electrical Engineering: \$4 for courses 53; 54; \$2 for 51; 60.

Engineering: \$2 for 1; 5; \$4 a semester for courses 11, 12; 13, 14; \$3 for course 15.

Geology: \$2.50 a semester for courses 1; 4; 8; 15; \$5 a semester for course 9, 10.

Mechanical Engineering: Fee for 82 depends on the nature of the work taken.

Physics: \$7 a semester for courses 1, 2; 29, 30; \$9 a semester for courses 5, 6; 11, 12; 25, 26; \$6 a semester for course 21, 22; \$12 a semester for course 23, 24.

SPECIAL EXAMINATIONS. A fee of \$3 will be charged for all special examinations.

ENTRANCE EXAMINATIONS. A registration fee of \$5 will be charged for entrance examinations; the payment to be credited on the bill for the first semester if the applicant is admitted.

DORMITORY RENTS. A new scale of prices will be charged for the academic year 1921-22 as stated in the lists given on pages 173-176.

DEPOSIT. At the beginning of each semester all students occupying dormitory rooms or taking laboratory courses must, in addition to the payments of the above amounts, make a deposit of \$5 toward charges for light or breakage during the semester.

DORMITORY ACCOMMODATIONS

IN the University dormitories there are one hundred and twenty-six single rooms and thirty-three suites. None of the rooms or suites are furnished. A table showing the rent and location of the dormitory rooms is printed below. The prices there given include rent, heat, and service for the college year; an additional charge of \$5 per semester is made for lighting.

Each student renting a room must sign a contract therefor in the form given below, on which surety may be demanded, binding him to pay or cause to be paid the rent of the room through the entire year. Not more than two students are allowed regularly to occupy a room or suite. No sub-letting of rooms will be permitted. Where two students rent a room together, each must sign a contract for half the room expenses. This obligation is not impaired by the student's removal from the University, whatever the cause of such removal.

The following is a contract between Brown University, party of the first part, and the undersigned, party of the second part. I hereby engage room No. in ; the same not to be occupied by any other person without consent of the party of the first part; and I bind myself to pay or cause to be paid to the Registrar of Brown University the entire rent, including heat and service, amounting to \$ for the college year beginning September, 192

It is a part of this agreement that I shall be held responsible for all damage or defacement of such room, ordinary wear excepted; also that disuse of the room by me on account of illness, or in case registration is refused me owing to low standing or bad conduct, does not impair the obligation of this contract.

Signed _____

This day of 192 .

When the University holds full contracts for a room, the tenant or tenants may admit to the use of the room in the daytime one or two students, but not more than two. The names of any such sub-tenants must be reported to the Registrar as soon as the arrangement for sub-tenancy is made. For each sub-tenant the University makes an extra charge of \$1.50 a semester for service. This sum is paid by the tenant-in-chief, if there is but one; if there are two, each pays half.

All rooms not assigned for 1921-22 before May 6, 1921, will be disposed of at a drawing on May 20 at 4 p.m. Men intending to enter college in September can arrange to be represented at the drawing by notifying the Registrar in advance.

TABLE SHOWING RENT AND LOCATION OF DORMITORY ROOMS

HOPE COLLEGE

No.	Division	Floor	Windows face	Bedrooms	1920-21 Rent	1921-22 Rent
1	South	1	E. & S.	There are no separate bedrooms, but Nos. 1 and 2, 5 and 6, 9 and 10, 35 and 36, 39 and 40, 43 and 44, can be used either as suites or as single rooms.	\$136	\$164
2	"	"	W. & S.		142	170
3	"	"	W.		136	164
4	"	"	E.		133	160
5	"	2	E. & S.		136	164
6	"	"	W. & S.		142	170
7	"	"	W.		136	164
8	"	"	E.		133	160
9	"	3	E. & S.		127	152
10	"	"	W. & S.		133	160
11	"	"	W.		127	152
12	"	"	E.		121	146
13	"	4	E. & S.		121	146
14	"	"	W. & S.		127	152
15	"	"	W.		121	146
16	"	"	E.		118	142
17	Middle	1	E.		133	160
18	"	"	W.		136	164
19	"	"	W.		136	164
20	"	"	E.		133	160
21	"	2	E.		133	160
22	"	"	W.		136	164
23	"	"	W.		136	164
24	"	"	E.		133	160
25	"	3	E.		121	146
26	"	"	W.		127	152
27	"	"	W.		127	152
28	"	"	E.		121	146
29	"	4	E.		118	142
30	"	"	W.		121	146
31	"	"	W.		121	146
32	"	"	E.		118	142
33	North	1	E.		133	160
34	"	"	W.		136	164
35	"	"	W.		148	178
36	"	"	E.		148	178
37	"	2	E.		133	160
38	"	"	W.		136	164
39	"	"	W. & N.		148	178
40	"	"	E. & N.		148	178
41	"	3	E.		121	146
42	"	"	W.		127	152
43	"	"	W. & N.		136	164
44	"	"	E. & N.		136	164
45	"	4	E.		118	142
46	"	"	W.		121	146
47	"	"	W. & N.		127	152
48	"	"	E. & N.		127	152

BROWN UNIVERSITY

UNIVERSITY HALL

No.	Division	Floor	Windows face	Bedrooms	1920-21 Rent	1921-22 Rent
10	South	2	S. & W.	1	\$235	\$282
12	"	"	W.	<i>None</i>	125	150
13	"	"	W.	"	125	150
16	"	"	E.	"	110	132
17	"	"	E.	"	116	140
18	"	"	E. & S.	"	143	172
19	"	3	S. & W.	1	225	270
21	"	"	W.	<i>None</i>	122	146
22	"	"	W.	"	122	146
25	"	"	E.	"	110	132
26	"	"	E.	"	110	132
27	"	"	E. & S.	"	131	158
28	"	4	S. & W.	1	205	246
30	"	"	W.	<i>None</i>	110	132
31	"	"	W.	"	110	132
32	"	"	E.	"	107	128
33	"	"	E.	"	107	128
34	"	"	E. & S.	"	131	158
40	North	2	W.	"	125	150
41	"	"	W.	"	125	150
44	"	"	E. & N.	"	131	158
45	"	"	E.	"	116	140
46	"	"	E.	"	116	140
47	"	3	W.	"	116	140
48	"	"	W.	"	116	140
50	"	"	W. & N.	1	225	270
51	"	"	E. & N.	<i>None</i>	125	150
52	"	"	E.	"	110	132
53	"	"	E.	"	110	132
54	"	4	W.	"	110	132
55	"	"	W.	"	110	132
57	"	"	W. & N.	1	195	234
58	"	"	E. & N.	<i>None</i>	125	150
59	"	"	E.	"	107	128
60	"	"	E.	"	107	128

SLATER HALL

1	South	1	E. S. & W.	2	260.00	312
2	"	"	E. & W.	1	200.00	240
3	"	2	E. S. & W.	2	260.00	312
4	"	"	E. & W.	2	245.00	294
5	"	3	E. S. & W.	2	250.00	300
6	"	"	E. & W.	2	245.00	294
7	"	4	E. S. & W.	1	175.00	210
8, 9	"	"	W.	1	194.00	232
10	North	1	E. & W.	2	269.50	324
11	"	"	E. W. & N.	2	269.50	324

SLATER HALL (*continued*)

No.	Division	Floor	Windows face	Bedrooms	1920-21 Rent	1921-22 Rent
12	North	2	E. & W.	2	\$269.50	\$324
14	"	"	W. N. E.	2	286.00	344
15	"	3	W. & E.	2	264.00	316
17	"	"	W. N. E.	2	275.00	330
18, 19	"	4	E. & W.	1	206.80	248
20	"	"	W. N. E.	1	176.00	212

CASWELL HALL

1	North	1	E. N. & W.	1	375	450
2	"	"	E. & W.	1	350	420
3	"	2	E. N. & W.	2	375	450
4	"	"	E. & W.	2	350	420
5	"	3	E. N. & W.	2	375	450
6	"	"	E. & W.	2	350	420
7	"	4	E. & N.	None	195	234
8	"	"	W. & N.	"	195	234
9	"	"	W.	"	165	198
10	"	"	E.	"	165	198
11	Middle	1	"	"	175	210
12	"	"	W.	"	175	210
13	"	"	"	"	175	210
14	"	"	E.	"	175	210
15	"	2	"	"	185	222
16	"	"	W.	"	185	222
17	"	"	"	"	185	222
18	"	"	E.	"	185	222
19	"	3	"	"	185	222
20	"	"	W.	"	185	222
21	"	"	"	"	185	222
22	"	"	E.	"	185	222
23	"	4	"	"	165	198
24	"	"	W.	"	165	198
25	"	"	"	"	165	198
26	"	"	E.	"	165	198
27	South	1	E. & W.	1	350	420
28	"	"	E. S. & W.	1	375	450
29	"	2	E. & W.	2	350	420
30	"	"	E. S. & W.	2	375	450
31	"	3	E. & W.	2	350	420
32	"	"	E. S. & W.	2	375	450
33	"	4	E.	None	165	198
34	"	"	W.	"	165	198
35	"	"	W. & S.	"	195	234
36	"	"	E. & S.	"	195	234

BROWN UNIVERSITY

MAXCY HALL

<i>No.</i>	<i>Floor</i>	<i>Windows face</i>	<i>1920-21 Rent</i>	<i>1921-22 Rent</i>
319	3	W.	\$135	\$162
320	"	"	135	162
321	"	W. & N.	135	162
322	"	E. & N.	140	168
323	"	E.	140	168
324	"	"	140	168
425	4	"	140	168
426	"	"	140	168
427	"	E. & S.	140	168
428	"	W. & S.	135	162
429	"	W.	135	162
430	"	"	135	162
431	"	"	135	162
432	"	"	135	162
433	"	W. & N.	135	162
434	"	E. & N.	140	168
435	"	E.	140	168
436	"	"	140	168

DIRECTORY TO THE DORMITORIES

Hope College, South Division, Rooms 1 to 16.

Hope College, Middle Division, Rooms 17 to 32.

Hope College, North Division, Rooms 33 to 48.

Maxcy Hall, Rooms 319 to 436.

Slater Hall, South Division, Rooms 1 to 9.

Slater Hall, North Division, Rooms 10 to 20.

University Hall, South Division, Rooms 1 to 34.

University Hall, North Division, Rooms 35 to 61.

Caswell Hall, North Division, Rooms 1 to 10.

Caswell Hall, Middle Division, Rooms 11 to 26.

Caswell Hall, South Division, Rooms 27 to 36.

PAYMENT OF UNIVERSITY BILLS

BEFORE registration, at the beginning of each semester, every student must pay at the Comptroller's Office, the sum of twenty-five dollars on account of his bill for the semester.

As soon as possible after the beginning of each semester a complete bill will be sent to each student at his college address (unless otherwise requested), and students will be held responsible for college addresses as filed by them. This bill will include the semester charges for tuition, room rent, laboratory fees, and any special fees, including deposits, which may properly be charged. The twenty-five dollar payment made before registration and the amount of scholarship aid, if any, will be deducted. The net bill must be paid before 5 p.m. on the thirtieth day of the semester. A student whose bill is not paid at this time will be dropped from the University.

Students who are employed in any capacity by the University must pay their bills without reference to the amount to be received for such service. Payment for service will be made by check at the middle and at the end of each semester.

Candidates for graduation in any year must pay all graduation fees with the bill for the second semester of that year.

ESTIMATE OF ANNUAL EXPENSES FOR 1921-22

The following is an approximate estimate of the annual expenses of a student who occupies a dormitory room (with a room-mate). It does not include the graduation fee of \$10 in the fourth year, nor outlay for clothes and traveling or other strictly personal expenses.

	<i>Lowest</i>	<i>Moderate</i>	<i>Liberal</i>
<i>Tuition</i>	\$200.00	\$200.00	\$200.00
<i>Room rent, including heat and service</i>	64.00	75.00	225.00
<i>Board (36 weeks)</i>	216.00	252.00	324.00
<i>Textbooks and laboratory expenses</i>	15.00	25.00	40.00
<i>Total</i>	<u>\$495.00</u>	<u>\$552.00</u>	<u>\$789.00</u>

Students who need to earn money find many opportunities for doing so in the city. See page 164.

FINANCIAL AID TO STUDENTS

THE aid which Brown University gives to students is of three kinds: awards from fellowship, scholarship, and aid funds; loans; payment in cash for services rendered. The awards from the scholarship and aid funds are made under the following conditions: an applicant must be of good moral

character; he must be in need of financial assistance; he must have been admitted without conditions to the Freshman class or to advanced standing, as a candidate for a degree. The scholarship or aid will be withdrawn from a recipient who is placed under college discipline or who fails to maintain creditable standing in his studies (a grade of *C* is expected).

The administration of the scholarship and aid funds is in the hands of a committee of the Faculty, annually appointed by the Corporation. Applications for scholarships for a given academic year should be filed with the Secretary of the Committee on Scholarships as soon as possible after May 1. The Committee will take action early in June on all applications received before June 1. Action on late applications is generally taken as soon as all the requisite information is received, but between August 15 and the opening of college no awards are to be expected. The President has charge of the administration of fellowships; service appointments are in charge of the Committee on Student Service.

FELLOWSHIP FUNDS

THE GRAND ARMY OF THE REPUBLIC FELLOWSHIP. The income of a fund of ten thousand dollars given by the Grand Army of the Republic, Department of Rhode Island, is annually awarded to a graduate of Brown University, of acknowledged excellence in scholarship and character. The recipient must be enrolled as a candidate for the degree of Doctor of Philosophy or have obtained that degree, must reside at Brown University, and must devote himself exclusively to advanced liberal study. Holders of the fellowship are appointed by the President of the University, subject to the approval of the Board of Fellows. Appointments to the fellowship are regularly made for one year, but incumbents of special diligence or ability may be reappointed. Descendants of Union Veterans of the Civil War are always to be preferred when the other qualifications of candidates are equal. The political or religious preferences of candidates cannot be taken into consideration. The President is authorized to make such other conditions not inconsistent with the above as he may from time to time deem wise and proper. Applications for this fellowship must be made in writing on blanks furnished by the Dean of the Graduate Department, and must be in the hands of the President not later than April 15. The Grand Army of the Republic Fellow for 1920-21 is

SAMUEL JOHN MANN, PH.B.

THE OLIVER CROMWELL GORTON ARNOLD BIOLOGICAL FELLOWSHIP. This is a fund of ten thousand dollars given by Dr. Oliver Henry Arnold in memory of his father. The income, or any part of it, is given annually according to the judgment and the discretion and under the direction of the President and the head of the Biological Department, for post-graduate work,

to any student, either male or female, of good character, who is a graduate of any collegiate institution of recognized standing and who has shown during his or her college course great diligence, talent, and marked ability in biological work. If in any year there should be more than one applicant for this fellowship, the President and the head of the Biological Department select a beneficiary from the results of a competitive examination as well as from the known ability of the student to conduct original research giving promise of a successful career. Should there be more than one candidate of exceptional merit, the income of this fund may be divided between two of them, but it may be given to one of them should it seem best to the President and the head of the Biological Department. In awarding this fellowship, other qualifications being equal, the candidate most in need of assistance will be selected. Should any beneficiary prove in any manner unworthy of assistance, it shall be discontinued, and should a beneficiary give evidence of great ability for conducting original research and a promise of large usefulness in his or her professional career, this income may be continued to him or her for one, two, or three years, according to the judgment of the President and the head of the Biological Department. Should the income of this fund, or any part of it, not be used in any year, the unused amount shall be set aside as a fund to be used in any succeeding year in assisting any student in post-graduate research work in the Biological Department who shall have all the qualifications mentioned in the preceding sections; or it may be used for any of the necessary and legitimate expenses for the advancement of research work in the Biological Department.

THE MORGAN EDWARDS FELLOWSHIP. This is a fund of ten thousand dollars given by the Philadelphia alumni of Brown University. Whenever the income from this fund shall amount to one thousand dollars, it may be awarded by the President and Faculty of the University to an alumnus of not more than ten years' standing, for the pursuit of original research in any department of knowledge approved by the President and Faculty. The work may be carried on in any part of the world where it seems that the best facilities exist for the study of the subject selected. The award is to be made solely upon the ground of past merit and future promise. In exceptional circumstances the appointment may be continued for one or two additional periods of six months. Applications for consideration as candidates for this fellowship should be addressed to the President of the University, from whom further details may be obtained. For 1920-21 this fellowship was awarded to

JAMES WALTER WILSON, PH.B.

THE EMMA JOSEPHINE AYER ARNOLD ARCHAEOLOGICAL FELLOWSHIP. This is a fund of ten thousand dollars given by Dr. Oliver Henry Arnold in memory of his wife. It is primarily for the Women's College

(see page 262), but if no graduate of the Women's College fulfils the conditions, the income of this fund may be paid, with the consent of the Dean of the Women's College, for one year, to some male student fulfilling the conditions. The candidate must be approved by the President of the University and the professors of the Greek and Latin Departments. For 1920-21 this fellowship was awarded to

MILDRED MORSE, A.M.

THE DU PONT FELLOWSHIP. The sum of seven hundred and fifty dollars given by E. I. du Pont de Nemours and Company, to be awarded for graduate research in chemistry. It is hoped that the fellowship will be continued from year to year. For 1920-21 this fellowship was awarded to

LOUIS ARTHUR RAYMOND PIERI, Sc.M.

TEACHING FELLOWSHIPS. In addition to the foregoing a number of Teaching Fellowships have been established, information regarding which will be furnished by the President.

SCHOLARSHIP AND AID FUNDS

FUNDED SCHOLARSHIPS. There are now seventy-six scholarships of one thousand dollars, each yielding the beneficiary forty to fifty dollars annually. With the exceptions indicated below, they bear the names of their founders. The income is awarded annually according to the conditions attaching to each fund.

THE ELEVEN NICHOLAS BROWN SCHOLARSHIPS

THE FOUR UNIVERSITY SCHOLARSHIPS

THE PRESIDENT'S SCHOLARSHIP, founded by President Sears.

THE SIX ALVAH WOODS SCHOLARSHIPS

THE JAMES H. DUNCAN SCHOLARSHIP

THE ISAAC DAVIS SCHOLARSHIP

THE ARNOLD WHIPPLE SCHOLARSHIP, founded by Mrs. Arnold Whipple.

THE EPHRAIM WHEATON SCHOLARSHIP, founded by James Wheaton.

THE JOSEPH BROWN SCHOLARSHIP, founded by Mrs. E. B. Rogers.

THE GARDNER COLBY SCHOLARSHIP

THE CROCKER SCHOLARSHIP, founded by Robert H. Ives and Thomas P. Ives, Trustees.

THE CLARK SCHOLARSHIP, also founded by the Messrs. Ives.

THE GEORGE K. AND H. A. PEVEAR SCHOLARSHIP

THE JOSEPH CHARLES HARTSHORN SCHOLARSHIP

THE ROGERS HIGH SCHOOL SCHOLARSHIP, founded by William Sanford Rogers.

THE JAMES WHEATON SCHOLARSHIP

THE CHARLES THURBER SCHOLARSHIP

THE PARDON MILLER SCHOLARSHIP, founded by Mrs. Ann E. Miller.

THE HEZEKIAH S. CHASE SCHOLARSHIP

THE WILLIAM BUCKNELL SCHOLARSHIP

THE AUSTIN MERRICK SCHOLARSHIP, founded by Mrs. Olive E. Merrick.

THE HORATIO N. SLATER SCHOLARSHIP

THE EARL P. MASON SCHOLARSHIP

THE NEWPORT SCHOLARSHIP, founded by William Sanford Rogers.

THE ALEXIS CASWELL SCHOLARSHIP

THE THREE HENRY JACKSON SCHOLARSHIPS

THE MUMFORD SCHOLARSHIP, founded by Mrs. Louisa D. Mumford.

THE ALBERT DAY SCHOLARSHIP

THE HENRY P. KENT SCHOLARSHIP

THE ROMEO ELTON SCHOLARSHIP

THE LEWIS FAIRBROTHER SCHOLARSHIP, founded by Mrs. Lewis Fairbrother.

THE GEORGE LAWTON SCHOLARSHIP

THE JOHN P. CROZER SCHOLARSHIP, founded by Mrs. Margaret Bucknell.

THE JAMES Y. SMITH SCHOLARSHIP

THE TWO S. S. BRADFORD SCHOLARSHIPS

THE FRANCIS R. ARNOLD SCHOLARSHIP

THE CORNELIA E. GREEN SCHOLARSHIP

THE TWO HENRY CLIFFORD KNIGHT SCHOLARSHIPS, founded by Miss Amelia S. Knight, in memory of her brother, a member of the class of 1875.

THE THURSTON SCHOLARSHIP, founded by the Hon. Benjamin F. Thurston, of the class of 1849.

THE RUFUS BABCOCK SCHOLARSHIP, founded by Mrs. Caroline Vassar Babcock Jones, in memory of her father, the Rev. Rufus Babcock, of the class of 1821.

THE JAMES FLETCHER BLACKINTON SCHOLARSHIP, founded by Mrs. Mary D. Blackinton, in honor of her husband, James Fletcher Blackinton, of the class of 1847.

THE SAMUEL WHITE DUNCAN SCHOLARSHIP, founded by Mrs. Mary Duncan Harris.

THE FIVE WILLIAM A. WHITE SCHOLARSHIPS, founded by Mrs. Abby S. A. White, in honor of her husband, William A. White, of the class of 1857.

THE RICHARDS SCHOLARSHIP, founded by the Rev. William Coolidge Richards, of the class of 1837.

THE BENJAMIN HUTCHINSON JUDAH SCHOLARSHIP

THE S. DRYDEN PHELPS SCHOLARSHIP, founded by the Rev. S. Dryden Phelps, of the class of 1844, the income to be given each year to some student who is preparing for the Baptist ministry.

THE ELIOT LOOMIS COLLINS SCHOLARSHIP, founded by Clarkson A. Collins in memory of his son, Eliot Loomis Collins, of the class of 1910, "the income to be given each year to some member of the Junior class needing pecuniary aid, who may possess his characteristic qualities of earnestness of application, steadfastness of character, and cheerful personality."

THE E. BENJAMIN ANDREWS SCHOLARSHIP, founded by the class of 1898.

THE JOSIAH NELSON CUSHING SCHOLARSHIP, founded by Samuel H. Tingley in memory of the Rev. Josiah Nelson Cushing, D.D., of the class of 1862, for forty years missionary in Burmah.

THE LUTHER WHITE SCHOLARSHIP, founded by Mabel Adaline White, in memory of her father, the Hon. Luther White, of the class of 1864, "the income to be given to deserving students, to be selected by the college authorities, but preference to be given always to male and female descendants of the members of the class of 1864."

THE HENRY LYON SCHOLARSHIP, founded by William H. Lyon, of the class of 1868.

THE SCHOLARSHIP OF THE CLASS OF 1895.

THE LYMAN PARTRIDGE SCHOLARSHIP, founded by Herbert G. Partridge, M.D., in memory of his father, the Rev. Lyman Partridge, of the class of 1863, the income to be awarded to some promising young man, preference being given to a student coming from the Baptist church in one of the following places: Wakefield, R. I.; Sharon, Westminister, Westwood, Mass.

THE GEORGE W. BERRIMAN SCHOLARSHIP, the unrestricted legacy of George West Berriman, of the class of 1920, 2d Lieutenant, 167th Infantry, who was killed in action in France, July 16, 1918.

There are also the following scholarships of larger amounts:

THE TWO GEORGE J. SHERMAN SCHOLARSHIPS, paid from the income of a fund of twenty-five hundred and sixty-five dollars.

THE BARTLETT SCHOLARSHIP of four thousand dollars, founded by Mrs. Elizabeth Slater Bartlett; the income to be "devoted to the support of one or more students needing pecuniary aid, and giving promise, by studious aim and by character and scholarship, of rising to distinction and usefulness."

THE GLOVER SCHOLARSHIP of nearly ten thousand dollars, founded by Henry R. Glover, "in memory of his father, Samuel Glover, of the class of 1808, and of his brother, Samuel Glover, Jr., of the class of 1839."

THE ANNIE E. WATERS SCHOLARSHIP of five thousand dollars.

THE REBECCA A. WHEELER SCHOLARSHIP of over sixteen hundred dollars ; the income to assist some worthy student, preferably a candidate for the Baptist ministry.

THE SCHOLARSHIP OF THE CLASS OF 1838 of thirty-eight hundred dollars.

THE JOSEPH CHARLES HARTSHORN SCHOLARSHIP of two thousand dollars.

THE TWO BANIGAN SCHOLARSHIPS of three thousand dollars each, founded by Joseph Banigan, of Providence ; the income as far as necessary to be used each year to defray the tuition of two students of the University.

THE GEORGE IDE CHACE SCHOLARSHIP of five thousand dollars, founded by Professor George Ide Chace, the income to be assigned each year by the Faculty to some member of the Senior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Senior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholarship for that year must be appropriated to the purchase of books for the Library of the University.

THE ABBY WHEATON CHACE SCHOLARSHIP of four thousand dollars, also founded by Professor George Ide Chace, the income to be assigned yearly by the Faculty to some member of the Junior class needing the money, who shows "marked ability, exemplary industry, generous aspirations, and irreproachable character." If in the Junior class there chances to be no person fulfilling the requirements of this scholarship, the proceeds of the scholarship for that year must be appropriated to the purchase of books for the Library of the University.

THE JOHN L. LINCOLN SCHOLARSHIP of twenty-five hundred dollars, founded by Abby G. Beckwith.

THE TRUMAN BECKWITH SCHOLARSHIP of twenty-five hundred dollars, founded by Abby G. Beckwith.

THE THAYER SCHOLARSHIP, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815 ; the income to be for the education of any young man or woman a resident of Uxbridge, Massachusetts, recommended by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

THE TWO WALTER G. WEBSTER SCHOLARSHIPS, founded by the Rev. Walter G. Webster, of the class of 1878 ; the income to go each year to two young men, members of the Freshman class, holding the full diploma of the Classical High School of the City of Providence and duly matriculated for the degree of Bachelor of Arts ; "the nomination to rest with the Principal of said school, and to be made on the basis of character and scholarship, due regard being had to the need of such assistance."

THE S. W. MARSTON SCHOLARSHIP of five thousand dollars, founded in the name of his father by Edgar L. Marston. This scholarship is open to any graduate of William Jewell College who may be recommended by the President of that institution.

THE THREE E. L. MARSTON SCHOLARSHIPS of five thousand dollars each, founded by Edgar L. Marston. The first scholarship is open to any graduate of La Grange College who may be recommended by the President of that institution. The second and third are open to graduates of Baylor University under similar conditions.

THE EATON SCHOLARSHIP of two thousand dollars, founded in memory of her husband by Mrs. Caroline B. Eaton; the income to be used "in the aid of indigent Baptist young men having the ministry in view, preference being given to young men from New Hampshire."

THE ALEXANDER FARNUM SCHOLARSHIP of two thousand dollars, founded by the Rev. Augustus Woodbury; the income to be given to such student as the Faculty shall select, the primary condition being that such student shall have been prepared for college at Phillips Exeter Academy in Exeter, New Hampshire.

THE ALBERT HARKNESS SCHOLARSHIP of three thousand dollars, founded by Professor Albert Harkness; the income to be paid annually under the direction of the Faculty to some student of excellent character and high scholarship who shall be in need of pecuniary aid.

A FRIEND'S SCHOLARSHIP of five thousand dollars, founded by a friend of the University, the income to be awarded annually to some student in need of aid.

THE ELLEN READ NEWELL SCHOLARSHIP of three thousand dollars, founded by George W. Newell in memory of his wife; "the income to be expended (1) in behalf of some worthy graduate of the Pawtucket High School who may need financial help, (2) to such other meritorious student as the President or Faculty may designate."

THE FRED HOMER WILLIAMS SCHOLARSHIP of fifteen hundred dollars; the income to be awarded to some needy and worthy young man, preference being given to a graduate of the High School in Foxborough, Massachusetts.

THE GEORGE WOODLEY HOGG SCHOLARSHIP of five thousand dollars, in memory of George Woodley Hogg, of the class of 1894, the income to be awarded annually to either one or two students at the discretion of the Scholarship Committee, preferably, though not necessarily, to students residing in the State of Rhode Island.

THE DAVID W. HOYT SCHOLARSHIP of twenty-seven hundred dollars, founded by the Alumni Association of the Providence English High School; the income to go each year to some young man or woman designated by the

Principal or the Acting Principal, for the time being, of the Providence English High School, subject to the approval of the President or the Acting President of Brown University.

THE CLASS OF 1905 SCHOLARSHIP of fifteen hundred dollars, founded by the class of 1905, to be awarded to a student in the University "designated by a duly authorized committee of said class of 1905, subject to the approval of the President or Acting President of Brown University."

THE JACOB SHARTENBERG SCHOLARSHIP, yielding the recipient one hundred and fifty dollars a year, founded by Jacob Shartenberg "to assist in paying the expenses of some deserving student in either the Sophomore, Junior or Senior class, . . . such student to be selected by the Faculty."

THE DYER-GURNEY-REED SCHOLARSHIP of two thousand dollars, founded by Charles F. Reed, of the class of 1885, the income to be awarded annually to (1) a male descendant of any member of the class of 1885; (2) a male student from the State of Massachusetts, preferably from Whitman, Abington, or Plymouth.

THE TWO SETH MANN SCHOLARSHIPS of twenty-five hundred dollars each, founded by Adelaide Elizabeth Mann, in memory of her father, Seth Mann, 2d, of the class of 1839.

THE BEVERLY S. LAKE SCHOLARSHIP. The sum of two hundred dollars a year to pay the tuition of a deserving student is given for the present by the Providence Mothers' Club, in memory of Beverly S. Lake, a Providence boy who gave his life for his country in the Great War.

AID FUNDS. There are eleven aid funds at the disposal of the University. The income of these funds is divided into scholarships of varying amounts, which are awarded under the general conditions applicable to all scholarships. They are as follows:

THE AARON LUCIUS ORDWAY MEMORIAL FUND of twenty-five hundred dollars, founded by Samuel H. Ordway in the name of his father, "the income to be used in the discretion of the President to assist regular students of the University who are in need of assistance. Each student who accepts such assistance shall in writing acknowledge the receipt of the same and pledge himself to repay the amount so received by him as soon as he can conveniently afford to do so, all sums so repaid to be added to the principal."

THE NANCY GOODNOW FUND of two thousand dollars, the income to be expended in assisting one or more students of the University who are preparing to be ministers of the Baptist denomination in the United States.

THE AID FUND, established by friends of the University in 1868 and now amounting to nine thousand three hundred dollars.

THE DANIEL WANTON LYMAN FUND FOR STUDENTS, established by Daniel Wanton Lyman and now amounting to nearly seventy-five thousand dollars.

THE WILLIAM GROSBECK GODDARD MEMORIAL FUND of five thousand dollars, founded by Col. Robert H. I. Goddard in the name of his son, "the income to be used by the President or Acting President of the University, in his discretion, to aid young men without adequate means to obtain an education. Each beneficiary shall give a receipt for all money received, and shall agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently."

THE EDWIN A. W. HARLOW FUND, founded by Edwin A. W. Harlow, now amounting to ten thousand four hundred dollars, the income to be "for assisting poor young men of excellent moral character in the Academic Department."

THE ROBERT H. HARLOW FUND of three thousand dollars, founded by Robert H. Harlow, the income to be "for assisting poor young men of excellent moral character in the Academic Department."

THE BENJAMIN BRAMAN FUND of one thousand dollars, the income to be granted annually to some worthy Christian student of limited means.

THE JAMES STANTON KENYON MEMORIAL FUND of three thousand dollars, founded by his daughters, Elizabeth Burrows Kenyon Wilkinson and Mary Stanton Kenyon, the income to be used to aid worthy young men of high personal character and of diligent application to their studies. Each beneficiary shall agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently, all sums so repaid to be added to the principal.

THE ROBERT JAMES YORKSTON MECKEL MEMORIAL FUND of over twelve hundred dollars, founded by Miss Mary Wehmeyer. "The income is to be used by the University in helping students who in the judgment of the President of the University may need assistance in carrying on their studies at Brown University."

THE WALTER S. HACKNEY FUND of three thousand dollars, founded by Walter S. Hackney, "the income thereof to be used by the President or Acting President of said University in his discretion to aid regular students of the University without adequate means to obtain an education. Each beneficiary shall give a receipt for all money received, and shall agree, without making any written pledge, to refund amounts received by him whenever he can do so conveniently, all sums so repaid to be added to the principal of said Fund."

THE JOHN HESS FUND for students, of over eighty thousand dollars, founded by Isban Hess.

THE ALBERT CLIFFORD DAY FUND of one thousand dollars, founded by Mary E. Day, "the income to be used in assisting needy male students of good character,"

UNIVERSITY SCHOLARSHIPS. In addition to the income of the Scholarship and Aid Funds, there have been established University scholarships, which are of three grades :

(1) A small number yielding from \$75 to \$100 each a semester, or from \$150 to \$200 a year, awarded to a few students of especially high scholarship.

(2) A number yielding each \$50 a semester or \$100 a year.

(3) A number yielding each \$25 a semester or \$50 a year, used in part to supplement the smaller endowed scholarships, and also for those students needing relatively less assistance.

It is expected that the holders of these scholarships will regard them as in a certain sense loans, and will at some time after graduation return to the treasury the amount awarded, to be used for the increase of the permanent scholarship funds, or that they will in some other way contribute to the endowment of the University.

LOAN FUNDS

I. The Alumni Loan Fund, now amounting to about forty-three hundred dollars, was established by the Alumni Association at the Commencement of 1900 by a vote transferring to the Treasurer of the University the fund formerly known as the Brown Loyalty Fund, to be used as a loan fund for students. The principal of this fund is loaned at interest, to be repaid as agreed upon in each instance.

II. There is another fund, of several hundred dollars, which is loaned in small amounts without interest, for short periods, to students unexpectedly needing temporary assistance.

SERVICE

The University is able to give employment to a number of students as monitors, assistants in the libraries and laboratories, members of the choir, clerks in the Registrar's office, and so forth. Applications for employment of this kind should be filed with the Committee on Student Service. See also the statement concerning undergraduate employment, page 164.

GRADUATE APPOINTMENT OFFICE

The University maintains a Graduate Appointment Office, dealing with permanent positions only, for the use of members of the Senior Class and Alumni. Business positions are in charge of Thomas B. Appleget, Executive Secretary ; teaching positions are in charge of Professor S. S. Colvin, Director of the School of Education.

PREMIUMS, PRIZES, AND HONORS

FOR EXCELLENCE IN UNIVERSITY STUDIES

THE WILLIAM GASTON SCHOLARSHIP. This fund of five thousand dollars was established in 1899 by the widow and children of the Hon. William Gaston, LL.D., of the class of 1840. Its income is awarded annually by the Faculty solely upon merit, without reference to financial condition. For 1920-21 this scholarship was awarded to

FRED LORIN ITSCHNER

THE GASTON PRIZE MEDAL FOR EXCELLENCE IN ORATORY. From the income of a fund of three thousand dollars established in 1894 as a memorial to the Hon. William Gaston, LL.D., of the class of 1840, a gold medal or, at the option of the winner, a bronze medal and a cash prize of one hundred and fifty dollars is annually awarded to the member of the graduating class who delivers the best original oration in English. The orations are not to exceed fifteen hundred words. In order to compete for the prize, a student must deposit with the Registrar a typewritten copy of his oration, signed with an assumed name, six weeks before the public competition. From these orations a committee appointed by the President of the University selects not more than six for delivery. The committee of award in the final contest consists of three members appointed by the President. In making the award, regard is given to thought, style, and delivery. The winner of the medal is entitled to deliver an oration at Commencement. In 1920-21 the orations must be deposited with the Registrar on or before December 4; the public competition will be held on January 11. In 1920 no award was made.

THE CARPENTER PREMIUMS, two in number, are derived from the income of funds established in 1867, one by Thomas Carpenter and one by Lydia Carpenter. They are assigned at the end of the Senior year to the two members of the Senior class who, "already on scholarships, shall, in the judgment of the Faculty, unite in the highest degree the three most important elements of success in life,—ability, character, and attainment." In 1920 these premiums were awarded to

ROBERT BRUCE LINDSAY *and* HAROLD AUGUSTUS PHELPS

THE HOWELL PREMIUM. The income of a fund amounting to one thousand dollars, presented to the University in 1867 by Gamaliel Lyman Dwight, is given at the close of the first semester of the Senior year to the student who, "having a good record of deportment, has the highest rank in Mathematics and Natural Philosophy." To be considered a candidate for the premium, a student must, in each semester from the beginning of the Freshman year

to the end of the first semester of the Senior year, take at least one course in one of the following subjects: Mathematics, Physics, Mechanics, Astronomy. In 1920 this premium was awarded to

ROBERT BRUCE LINDSAY

THE FOSTER PREMIUM IN GREEK is derived from the income of a fund of three thousand dollars bequeathed to the University in 1880 by the Hon. Lafayette Sabine Foster, of the class of 1828. In accordance with the terms of the donor's will, the income of this fund is to be "annually paid to that scholar of the institution who passes the best examination in the Greek language, the examination to be made in the first, third, and twenty-fourth books of Homer's *Iliad*, or in the *Oration on the Crown* by Demosthenes." The examinations are open to the members of the Senior class. The next examination will be held on Wednesday, May 4, 1921; candidates will be examined in the *Iliad*. In 1920 the premium was awarded to

WALTER RICHMOND GARDNER

THE LUCIUS LYON PREMIUMS IN LATIN are derived from the income of a fund of five thousand dollars presented to the University in 1893 by Mrs. Caroline L. Lyon, in memory of her husband, Lucius Lyon, of the class of 1844. Five-tenths of the income each year forms the first premium, three-tenths the second, and two-tenths the third. Any part of the income not needed in any given year must be added to the fund. The premiums are awarded on the basis of a special examination held during the second semester of the Senior year. In 1921 the examination will be held on May 18. The examination may relate to any or all of the following subjects: the Latin language, Roman literature, Roman history. The President of the University and the head of the department of Roman Literature and History prescribe the conditions for admission to the examination. In 1920 premiums were awarded as follows:

The first premium to ROBERT BRUCE LINDSAY

The second premium to LORIMER DOUGLAS MILTON

THE CLASS OF 1873 PRIZE. The income of a fund of one thousand dollars, presented to the University by the class of 1873, is awarded each year to that member of the Senior class who writes the best essay on a historical or a philosophical subject. The subjects, which are of a historical nature one year and of a philosophical nature the next, are assigned by the respective departments. In 1921 the essays must be deposited with the Registrar on or before May 28. For 1920-21 the subject is: *In what Sense is Man Free?* For 1919-20 the subject was: *The Growth of the Idea of a League of Nations in Modern Times*. The prize was awarded to

SAMUEL JOHN MANN

THE BISHOP McVICKAR PRIZES were founded by the late Rt. Rev. William N. McVickar, Bishop of the Protestant Episcopal Diocese of Rhode Island, and are continued by his sister, Miss E. C. McVickar. A first prize of fifty dollars and a second prize of twenty-five dollars are awarded for the best essays of from three to four thousand words on a subject assigned by the department of Biblical Literature. The competition is open to undergraduate men who are, or have been, students in the department of Biblical Literature. Those who intend to compete must give their names to the head of the department not later than February 16, and the essays, under an assumed name, must be delivered to the Registrar not later than April 16. For 1920-21 the subject is: *The Hebrew Conquest of Canaan, — its history, literature, and religious significance*. The prizes for 1919-20 were awarded as follows:

The first prize to CECIL ALEXANDER WATT

The second prize to FRANK IRVING NOYES

THE SOCIETY OF COLONIAL DAMES PRIZE IN AMERICAN HISTORY. The income of a fund of fifteen hundred dollars, known as The Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906, is awarded each year as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use of authorities, and should, in general, extend to at least four thousand words. Those who intend to compete should give their names to the head of the department of History not later than March 1, and the essays, under an assumed name, must be delivered to the Registrar not later than April 30. The name of the successful competitor is announced at Commencement. For 1920-21 the subject is: *The Commerce of Rhode Island with the Southern Continental Colonies in the Eighteenth Century*. For 1919-20 the subject was: *The Early Development of Shipbuilding on Narragansett Bay*. The prize was awarded to

HARRISON DELANO RICKETSON

THE BENNETT PRIZE of fifty dollars was established in 1905 by Philo Sherman Bennett, for the best essay discussing the principles of free government. The essays of from three to six thousand words in length must be typewritten, signed with an assumed name, and deposited with the Registrar before 1 p.m. on Saturday, January 15. The judges, three in number, are appointed by the President. For 1920-21 the subject is: *The Practical Value of Preferential Presidential Primaries in the United States*. No prize was awarded in 1920.

THE CLASS OF 1880 PRIZES, established in 1905 by the class of 1880, are awarded each year to those undergraduates who show the most ability in presenting

arguments on some current question of importance to the University. The subject for discussion, the time, and the manner of presentation are all determined by representatives of the English department in consultation with the president of the Debating Union and the editors-in-chief of the *Brunonian* and the *Brown Daily Herald*. The prizes are awarded by a board of five judges: two are appointed by the President, two by the undergraduate members of the committee in charge; the fifth is a member of the English department.

In 1920-21 a first prize of thirty-five dollars and a second prize of twenty-five dollars will be awarded to the students who show the most ability in a public discussion of the subject. This discussion will be held on December 14; a preliminary discussion will be held on December 7. A first prize of twenty-five dollars and a second prize of fifteen dollars will be awarded to the writers of the best argumentative essays of from three thousand to five thousand words upon the same subject. The essays must be signed with an assumed name; they must be in the hands of the Registrar before 4 p.m., December 9. Either prize for the essay may be withheld if the judges deem it best. A student may enter both competitions. For 1920-21 the subject is: *Should Brown University and its Alumni adopt a policy of Supporting permanently a "Brown in China," and if so, how should this support be extended?* For 1919-20 the subject was: *Should Brown University debar Freshmen from all Varsity Athletic Teams?* The prizes were awarded as follows:

The first prize for the discussion to WALTER MORRILL BURSE

The second prize for the discussion to ROBERT GERSTENLAUER

The first prize for the essay to RICHMOND LOTHROP WATSON

The second prize for the essay to WILLIAM WORTH HALL

THE HICKS PRIZES FOR EXCELLENCE IN DEBATE, established by the Hon. Ratcliffe Hicks, of the class of 1864, are annually awarded as follows:

I. Two prizes of fifty dollars each, one for each of the two sets of representatives of the University in the intercollegiate debates. In each instance the prize is given to the man showing the greatest ability both in the preliminary trials and in the final trial. In awarding the prize, regard is given to thought, style, and delivery. The judges are at least three in number, appointed by the Debating Union. In 1920 these prizes were awarded to

WALTER MORRILL BURSE and ROBERT GERSTENLAUER

II. A first prize of thirty dollars and two second prizes of twenty dollars to the students showing the greatest ability in a public debate between the representatives of the Junior and Sophomore classes. Each class is represented by three men, whom a committee appointed by the President of the University chooses from the preliminary contestants at least three weeks before the public debate. This committee also determines the subject and makes the necessary arrangements. The judges in the public debate are three,—

one appointed by the President, and one by each group of competitors. The prizes are awarded irrespective of the decision upon the debate as a whole. Any one prize may be withheld if no one is adjudged to deserve it. In making the award, regard is given to thought, style, and delivery. In 1921 the public debate will be held on May 10. In 1920 these prizes were awarded as follows:

The first prize to ROBERT GERSTENLAUER

The second prizes to ERNEST STUART MACMILLAN
and ARTHUR HENRY FEINER

THE HICKS PRIZE IN ENGLISH, awarded at the end of the first semester of the Senior year to the student having the highest standing in the courses in English literature and language. In 1920 this prize was awarded to

CARROLL BURTON LARRABEE

THE DUNN PREMIUM. The income of a fund of one thousand dollars, presented to the University in 1872 by pupils and friends of Professor Robinson Potter Dunn, is given, at the end of the Junior year, to the student having the highest standing in the courses in rhetoric, English composition, and public speaking. In making the award, regard is given to the number of such courses taken as well as to the rank attained in them. In 1920 this premium was awarded to

THOMAS CORCORAN GUNNING

THE J. ACKERMAN COLES PRIZES. The income of a fund of one thousand dollars, presented to the University in 1907 by Dr. J. Ackerman Coles, is expended for prizes for the encouragement of intramural athletic sports.

THE CARPENTER PRIZES FOR ELOCUTION, derived from the income of a fund established in 1867 by Thomas Carpenter, are awarded each year to the three students to whom are assigned the first, the second, and the third rank of excellence in elocution. The competition is open to all members of the Sophomore class, and to those members of the Junior class who did not enter the preliminary competition in their Sophomore year. The selections declaimed may be either prose or verse. They must be approved by the Professor of Public Speaking, with whom competitors must enter their names not later than January 21. A preliminary contest for the purpose of selecting the speakers takes place in the early part of the second semester; all arrangements for it are in the hands of the Professor of Public Speaking. The committee of award consists of five members,—the Professor of Public Speaking, who is the chairman, two persons selected by the Corporation, and two persons selected by the Sophomore class; no one who is or has been a member of the class is eligible to membership in the committee. In 1921

the contest will be held in Manning Hall on April 19. In 1920 these prizes were awarded as follows :

The first prize to ELLSWORTH GALE

The second prize to ROBERT GERSTENLAUER

The third prize to MYLES STANDISH

THE SUSAN COLVER ROSENBERGER PRIZE of fifty dollars was established in 1919 by Jesse L. Rosenberger, for annual award under conditions to be laid down by the University. It is a stipulation of the bequest that the prize "shall not be assigned permanently to any one department of the University, nor continuously for any one thing, but shall be awarded for whatever, from year to year, or from time to time, it is believed will, at the time, do the greatest good, either in the interests of scholarship, or for the development of character," and that from time to time a medal shall be awarded to a graduate of Brown University or another person "for specially notable or beneficial achievement."

In 1920 the prize was offered for the best essay on *The Newer Theories of Atomic Structure: Their Bearing on the Progress of Science*. The prize was awarded to

ROBERT BRUCE LINDSAY

THE CULL PRIZE IN ENGINEERING. A prize of fifty dollars, the gift of Joseph H. CULL, of the class of 1910, is awarded at the end of the first semester of the Senior year to the student who, in the estimation of the teachers of engineering in consultation with the committee on scholarships, best combines a high degree of attainment in his engineering studies with a promise of future professional achievement, particular consideration being shown to those specializing in electrical engineering.

THE ENGINEERING PRIZE of fifty dollars, presented to the University by graduates of the Engineering Departments and others, is awarded not later than November 1 to the member of the Senior class who, being a candidate for the degree of Bachelor of Science in Engineering, has maintained the highest standing in Engineering 2, 7, 8, 9, 10, 16 (Mechanics, Strength of Materials, Structures, and Hydraulics), and who gives marked promise of future usefulness in some branch of the profession of engineering.

FOR EXCELLENCE IN PREPARATORY STUDIES ‡

THE PRESIDENT'S PREMIUMS, derived from the income of a fund presented to the University in 1843 by President Wayland, are awarded each year to those members of the Freshman class who upon examination are found to excel

‡ Any of these prizes may not be awarded if the papers presented by the competitors are not considered of sufficiently high grade.

in the studies required for admission to the University in Greek and Latin. First and Second Premiums are awarded in each of these studies. The examinations deal with the general principles and laws of the languages involved rather than with irregularities and exceptions. Special importance is attached to the pupil's familiarity with the subject-matter of the works read, and to his ability to translate with accuracy and facility into clear, appropriate, and idiomatic English. The examination in Greek is held in 5 Maxcy Hall at 2.30 p.m. on the second Wednesday of the first semester and that in Latin in 1 Sayles Hall at 2.30 p.m. on the third Wednesday. The award of these premiums in 1920 was as follows:

In Greek the first premium to LUIGI CAPASSO, instructed in the Classical High School, Providence.

The second premium to ERNEST ELMORE INTLEHOUSE, instructed in the Classical High School, Providence.

In Latin the first premium to GEORGE HALSEY HUNT, instructed in the High School, Richmond Hill, N. Y.

The second premium to SAMUEL EVERETT WILKINS, JR., instructed in the Hope Street High School, Providence.

THE HARTSHORN PREMIUMS IN MATHEMATICS, derived from the income of a fund of one thousand dollars presented to the University in 1872 by Joseph Charles Hartshorn, of the class of 1841, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the mathematical studies required for admission to the University. The examination is held in 26 Wilson Hall at 2 p.m. on the fourth Wednesday of the first semester. In 1920 equal premiums were awarded to

EDWARD RANGER COOP, *instructed in the Hope Street High School, Providence,*
and ROBERT GALLUP STURTEVANT, *instructed in Albany Academy, Albany, N. Y.*

THE ENTRANCE PREMIUMS IN FRENCH, derived from the income of the President's Premium Fund, are awarded each year to the two members of the Freshman class who upon examination are found to excel in the French studies required for admission to the University. The examination is held in 1 Sayles Hall at 2 p.m. on the fifth Wednesday of the first semester. The award of these premiums in 1920 was as follows:

The first premium to GEORGE SAUTÉ, instructed in the West Warwick High School, Riverpoint.

The second premium to CHARLES NORRIS YOUNG, instructed in the Hope Street High School, Providence.

THE CAESAR MISCH ENTRANCE PREMIUMS IN GERMAN are awarded each year to the two members of the Freshman class who upon examination are found

to excel in the German studies required for admission to the University. The examination is held in 5 Sayles Hall at 2 p.m. on the sixth Wednesday of the first semester. The award of these premiums in 1920 was as follows:

The first prize to HANS JORDAN GOTTLIEB, instructed in the High School, Richmond Hill, N. Y.

The second prize was not awarded.

HONOR SCHOLARSHIPS

To encourage proficiency in studies and to provide recognition for successful application to college work, the Faculty has established Honor Scholarships without aid as follows:

THE JAMES MANNING SCHOLARSHIPS, awarded to those undergraduates whose work throughout the year has been of such excellence that they are deemed worthy of very high academic distinction. For 1919-20 these scholarships were awarded as follows:

Class of 1920

LE ROY WALTON BLACK	FREDERIC WILLIAM LATHROP
WALTER RICHMOND GARDNER	ROBERT BRUCE LINDSAY
GEORGE WASHINGTON GRIMM, JR.	HAROLD AUGUSTUS PHELPS

Class of 1921

THOMAS CORCORAN GUNNING	FRED LORIN ITSCHNER
HAROLD EINAR MAGNUSON	

Class of 1922

THOMAS GARDINER CORCORAN	WILLIAM CHACE GREENE, JR.
KENNETH HENRY NICHOLS NEWTON	

FRANCIS WAYLAND SCHOLARS

Class of 1920

MARSHALL NAIRNE FULTON	CHAUNCEY DEPEW WENTWORTH
PAUL RUPERT GAST	DANIEL EVERETT WHITFORD
SETH BRAYTON GIFFORD	RAYMOND LOUIS WILDER

Class of 1921

WAYNE MOODY FAUNCE	FRANK JOSEPH HONAN
HUGH MILLER	

BROWN UNIVERSITY

Class of 1922

PHILIP MEADER BROWN

ALLEN ASHBEY EDGCOMB

WILLIAM SEAMAN

Class of 1923

HAROLD MARQUISS KEELE

APPOINTMENTS FOR COMMENCEMENT

At Commencement three or four members of the graduating class deliver original orations in English of not more than fifteen hundred words each. One speaker is the winner of the Gaston medal; the others are appointed by the Faculty. The basis of selection is scholarship, ability to write, and ability to speak. In 1920 the speakers selected by the Faculty were:

MERRILL KELLEY BENNETT

MARSHALL NAIRNE FULTON

WALTER RICHMOND GARDNER

DEPARTMENT HONORS ‡

HONORS in any department are awarded, at the completion of the studies leading to a bachelor's degree, to those who have (1) taken a total of eighteen semester hours in the department, of which twelve hours have been of *A* grade and the other six not lower than *B* grade; (2) secured a mark of *A* or *B* in eighty-five per cent. of all their courses of study. In any department, however, certain specified courses may not be included in those counted for Final Honors. The names of all students awarded Department Honors are printed in the Commencement Program and in the Annual Catalogue. In 1920 the awards were as follows:

VICTOR FREEMAN ADAMS, *Economics*.LE ROY WALTON BLACK, *Biology*.JOHN ROBERT CALDOW, *Romance Languages and Literatures*.JAMES QUAYLE DEALEY, JR., *Economics, Social and Political Science*.IRVING AUGUSTINE FARRELL, *Biology*.MARSHALL NAIRNE FULTON, *Biology, Chemistry*.WALTER RICHMOND GARDNER, *Greek Literature and History, History*.SETH BRAYTON GIFFORD, *Biology*.JOHN WALTER HARRIMAN, *English*.HERMAN ALBERT LAWSON, *Chemistry*.ROBERT BRUCE LINDSAY, *Mathematics, Physics*.SAMUEL JOHN MANN, *History*.

‡ For students who entered in 1918 or thereafter a new system of Honors has been established. Department Honors will be discontinued after the class of 1921. See pages 195, 196.

HAROLD AUGUSTUS PHELPS, *Social and Political Science.*

RICHMOND LATHROP WATSON, *Economics.*

CHAUNCEY DEPEW WENTWORTH, *Mathematics.*

DANIEL EVERETT WHITFORD, *Chemistry, Mathematics.*

RAYMOND LOUIS WILDER, *Mathematics.*

ELMER STUART WOODWARD, *Chemistry.*

EDITH STEELE BOWEN, *Biology.*

RUTH PEARSON CHANDLER, *Biology, English.*

RACHEL TUPPER EASTERBROOKS, *Mathematics.*

DOROTHY STEPHANS HOLT, *Romance Languages and Literatures.*

FRANCES MORRILL MERRIAM, *Mathematics.*

CHARLOTTE ANNA MIKALSON, *History.*

CECELIA MADELEINE MORIN, *Romance Languages and Literatures.*

DOROTHY PRESTON, *Botany.*

MARGARET PRESTON, *Biology.*

ROSA LEE SCHNEIDER, *English.*

KATHARINE ADELAIDE TORREY, *English, Romance Languages and Literatures.*

HELEN KINGSBURY WALLACE, *Art.*

NETTIE WILSKER, *Romance Languages and Literatures.*

MARJORIE HELEN WOODWARD, *Romance Languages and Literatures.*

PRELIMINARY AND FINAL HONORS

A new system of Honors and Honors Courses has been established. The purpose is to stimulate more vital interest in scholarship, to offer students of marked ability and energy greater opportunity to carry on their work while in close association with one or more members of the Faculty, and to encourage them to measure their achievement in terms of breadth and depth of knowledge rather than in number of courses or of mere facts acquired. The system will be administered by the Committee on Educational Advice and Direction.

Preliminary Honors of two grades will be awarded at the close of the Sophomore year to students whose work for the two years has been of an exceptional character. Final Honors of two grades will be awarded at graduation on the basis of a student's work in some chosen field of concentration. Honors Courses will be established in certain departments.

PRELIMINARY HONORS

Beginning with the class of 1922, two grades of these honors will be awarded to candidates for the degrees of A.B., Ph.B., and Sc.B.: *Preliminary Honors* to those whose grades contain (1) not less than forty per cent. *A*, (2) not less

than eighty per cent. *A* and *B*, and (3) no failures; *Preliminary Highest Honors* to those whose grades contain (1) not less than sixty-five per cent. *A*, and (2) one hundred per cent. *A* and *B*.

FINAL HONORS

Beginning with the class of 1922, two grades of Final Honors will be awarded. Candidacy for Final Honors will be open to those to whom Preliminary Honors or Preliminary Highest Honors have been awarded. Candidacy must be announced to the Committee on Educational Advice and Direction, and to the departments concerned, before registration for the Junior year. In exceptional cases admission to candidacy may be granted by the Committee to those who have not achieved either form of preliminary honors. Under special circumstances candidates may be admitted by the Committee at the beginning of the second semester of the Junior year. Every candidate must pursue with distinction at least five year courses in his field of concentration.

Final Honors will be offered only in departments in which at least one special course can be given to the student in each of the Junior and Senior years. These courses may be provided by either (1) additional assignments (in the form of conferences, reading, reports, or laboratory exercises) in connection with courses already offered, or (2) special *Honors Courses*, which will call for a quality and quantity of work greatly in excess of ordinary college courses. On recommendation of the department, the Committee may approve double credit for an Honors Course, thus allowing the student to obtain the regular year credit by carrying four courses only.

Candidates for honors (1) will be excused from the regular final examinations of the second semester of the Senior year in courses in their field of concentration, and (2) on recommendation of the departments concerned, will be excused from examinations in these courses at the end of the first semester of that year.

Before the end of the Senior year, every candidate for honors will be examined in the whole work of the field of concentration. This examination will consist of a written test of not less than four hours duration, and of an oral examination, conducted by a committee of the departments concerned. A thesis or report may also be required at the option of these departments. Students failing to maintain the proper standard in this examination will be given credit for their concentration work toward the degree, in accordance with the regular requirements for graduation.

The two grades of final honors awarded will be designated as *Honors* and *Highest Honors*; the latter will be reserved for men of exceptional performance and promise.

Recommendations for Honors and Highest Honors must have the written approval of the departments concerned and of the Committee on Educational Advice and Direction.

A special certificate will be awarded to students attaining Final Honors, and a list of such students will be printed on the Commencement program and in the University catalogue.

Candidates who are found not to be qualified for unusual achievement in the field chosen, or not to be taking advantage of the special opportunities offered, will be required to discontinue candidacy for honors at the close of any semester.

Candidates will be required to discontinue candidacy at the end of any semester in which they do not maintain an average *B* standing in courses outside their field of concentration.

DEGREES CONFERRED IN 1920

DEGREES IN COURSE

BACHELOR OF ARTS

Edmund Francis Beagan	Chauncey Taft Langdon. <i>With the class of 1918</i>
Roland Dewey Beck	Frederick William Lathrop. <i>With the class of 1919</i>
Russell William Besser	Robert Bruce Lindsay
Malcolm Christopher Brown	John Alexander McGhee, Jr.
Walter Morrill Burse	Walter Raymond McGinn. <i>With the class of 1918</i>
John Robert Caldwell	Thomas Aloysius McGuire. <i>With the class of 1918</i>
Peter Leo Cannon. <i>With the class of 1918</i>	George Samuel Magee. <i>With the class of 1919.</i>
Harold Aldrich Campbell	Vernon Charles Manley. <i>With the class of 1918</i>
Phillips Dean Carleton	Donald Gordon Millar. <i>With the class of 1919</i>
Armand Laurier Caron. <i>With the class of 1918</i>	Lorimer Douglas Milton
Raymond Eustace Clafin	Frank Irving Noyes
Roger Tillinghast Clapp. <i>With the class of 1919</i>	Harold Augustus Phelps
Paul Whitman Davis	Lyle Meton Prouse. <i>With the class of 1918</i>
James Quayle Dealey, Jr.	Richard Valentine Ratigan
Willis Bates Downey. <i>With the class of 1919</i>	Anthony Romano
Clyde Lester Driscoll. <i>With the class of 1919</i>	Fred Emil Schoeneweiss
Walter Richmond Gardner	George Clemison Scott. <i>With the class of 1918</i>
Dutee Jerald Hall	William Desmond Shay
Raymond Halliday	Wilbert Bancroft Skerrye. <i>With the class of 1919</i>
Samuel Heller	Joseph Smith
Paul Herriott	Dwight Spencer. <i>With the class of 1919</i>
Allen Douglass Hill	Edward James Walsh
Richard Armington Hopkins	Chauncey Depew Wentworth
Edward Howell, Jr. <i>With the class of 1919</i>	Harvey Abbott Whipple
Wendell Everett James. <i>With the class of 1917</i>	Stanley Patterson Whipple
Ernest Ashley Jenckes	Daniel Everett Whitford
James Lawrence Jenks, Jr.	Frank Jacob Zitserman
Morrill Phillips Josselyn	
Thomas Bartholomae Keville. <i>With the class of 1916</i>	
Robert Albert Kingsley	

Kathleen Mary Barr
 Edith Steele Bowen
 Anna Pauline Butler
 Mildred Frances Chase
 Hope Arnold Cushing
 Marion Alberta Day
 Rachel Tupper Easterbrooks
 Dorothy Stephens Holt
 Mary Gertrude Honan
 Grace Heath Maurer
 Frances Morrill Merriam
 Charlotte Anna Mikalson
 Rosa Jessup Minkins
 Cecelia Madeleine Morin
 Harriet Ellen Perry

Elsie May Potter
 Margaret Louise Pressey
 Margaret Preston
 Magdalen Margaret Quinn
 Marion Wood Raybold
 Mildred Elizabeth Runyeon
 Rosa Lee Schneider
 Mary Elizabeth Spencer
 Bernice Sylvester
 Alice Tattrie
 Miriam Elizabeth Weaver
 Stella Elizabeth Whittaker
 Nettie Wilsker
 Marjorie Helen Woodward

BACHELOR OF PHILOSOPHY

Victor Freeman Adams
 George Chester Ames. *With the class of 1919*
 Wilbur Reginald Anderson. *With the class of 1919*
 Simon Louis Arouds. *With the class of 1913*
 Donald Miller Aumack
 Henry Congdon Aylsworth
 Herbert Boutell Barlow
 William Chester Beard
 Merrill Kelley Bennett. *With the class of 1919*
 Le Roy Walton Black
 Robert Angell Bogle
 Allen French Bowen. *With the class of 1919*
 Earl Hartwell Bowen. *With the class of 1919*
 George Wells Brace. *With the class of 1919*
 Frank Donald Brigham
 Abraham Lincoln Brisk
 Morris Henry Brown. *With the class of 1919*

Herbert Butterfield. *With the class of 1918*
 Harley Frank Carey
 Reuben Rogers Chase, Jr. *With the class of 1918*
 Chester Wellington Chinn
 Ernest Taylor Clough
 Donald Wilcox Coggeshall. *With the class of 1919*
 Rodney Esten Cook
 Bruce Noel Coulter
 William Judson Crouch
 Donald Haseltine Curtis
 Michael De Filippis
 Clark Howard Denison
 Vladimir Triphon Dimitroff
 John Dorin
 Wallace Broga Kelham Dove
 Arthur Justin Dows. *With the class of 1919*
 Guyton Saxon Eddy. *With the class of 1919*
 William Grosvenor Ely, Jr.
 Irving Augustine Farrell

Albert Henry Flint, Jr. *With the class of 1918*

William McLeod Fraser. *With the class of 1919*

Marshall Nairne Fulton

William McKinley Gafafer. *With the class of 1918*

Sidney Russell Gair. *With the class of 1918*

Davis Thayer Gallison. *With the class of 1919*

Paul Rupert Gast

Seth Brayton Gifford

Beale Mitchell Gordon. *With the class of 1919*

Maurice Isaac Green. *With the class of 1919*

Ray Woodville Greene, Jr.

George Washington Grimm, Jr.

Frank Charles Haddleton. *With the class of 1919*

Ronald Prescott Hall

Herbert Percival Halvorson. *With the class of 1917*

John Walter Harriman

Henry George Harris. *With the class of 1919*

Seaverns Winthrop Hilton

Harold Gardiner Hood

Lawrence Benjamin Howell

Raymond Maverich Hunter

Donald Rice Hylan

Manuel James Jemail. *With the class of 1918*

Louis Edwin Jones

Charles Bird Keach. *With the class of 1917*

Elmer Stackhouse King

Chauncy Bemis Ladd. *With the class of 1917*

Carroll Burton Larrabee. *With the class of 1918*

Herman Albert Lawson

Charles Hamilton Lawton, Jr.
Kuo-Hao Lin

Arnold Elias Lindstrom

Walter Bartlett Lister

Harold Spencer Litchfield

Henry Newman Lonergan

Harold William Lord

Clifton Norman Lovenberg

Albert Edgar Lownes

Alan Nicholson McDougall

Russell Elwood McKenzie. *With the class of 1918*

Daniel Allan MacPherson. *With the class of 1919*

William Michael McSweeney. *With the class of 1919*

Samuel John Mann. *With the class of 1919*

Harold Estes Marr

Frank Thorman Meyer

Bradford Van Rensselaer Moore.
With the class of 1919

Walter Vincent Moriarty

Edwin Michael Murphy

Ernest Eder Nelson. *With the class of 1919*

Elbert Perkins Nichols. *With the class of 1919*

Ralph Hall Nichols. *With the class of 1919*

Harry Norcross. *With the class of 1919*

John Champlin Noyes. *With the class of 1918*

Evariste Adrien Orteig

Benton Bradley Orwig

James Anthony Peirce

Harlow Jerome Peters. *With the class of 1919*

Charles Reginald Phillips

Louis Arthur Raymond Pieri

George Otto Podrasnik

George Henry Rhodes

DEGREES CONFERRED

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Wilbur Lamprey Rice. *With the class of 1918*

Philip Edwin Scott. *With the class of 1919*

Donald Scholefield Shaw

Samuel Sheftelman

James Sinclair

Laurence Richards Smith

Walter Kenneth Sprague. *With the class of 1917*

Ralph Evans Stanton

Edward Bloodgood Stringham, Jr.

Joseph Woodbury Strout, Jr. *With the class of 1918*

John Baker Tasker, Jr.

Abraham Thomas

Frederick Wallace Thomas. *With the class of 1919*

Frederic Allen Thompson

Howard Wilson Tindall. *With the class of 1919*

Albert Joseph Tracy. *With the class of 1919*

Elton Hammond Tucker

Thomas Francis Vance, Jr.

Byron Adams Waterman

Richmond Lothrop Watson

Raymond Brooks West. *With the class of 1918*

Raymond Louis Wilder. *With the class of 1918*

Elmer Stuart Woodward

Lloyd Parker Zellers

Marguerite Adelaide Armstrong

Dorothy Westervelt Bennett

Ruth Pearson Chandler

Mariette De Robbio

Minerva Rilla Gates

Zylpha Marie Goulett

Constance McLean Hayden

Grace Ethelena Lewis

Helen May Newbury

Camelia Papalia

Avis Miller Pillsbury

Dorothy Preston

Mary Augusta Rhodes

Beatrice Alice Smith

Katherine Adelaide Torrey

Helen Kingsbury Wallace

Lucy Marie Young

BACHELOR OF EDUCATION

James Howard Covell

Susanna Adeline Matteson

BACHELOR OF SCIENCE IN CIVIL ENGINEERING

Alexander Addeo

Stanley Milburn Dore

Waldon Charles Nason. *With the class of 1918*

Frederick Holroyd Paulson

William Francis Rooney

Ernest Frank Santangini

Maynard Pressley White

Webb Westcott Wilder

BACHELOR OF SCIENCE IN ELECTRICAL ENGINEERING

Charles Frederick Abbott

Irving Smith Crompton

Leo Paul Lanigan

Leonard Killian Murphy

BACHELOR OF SCIENCE IN MECHANICAL ENGINEERING

Harry Francis Coleman. *With the*
class of 1919

Edward Wilson Smith
Walter Fish Wolfe

MASTER OF ARTS

Ida Elizabeth Arnold, Ph.B.
Le Roy Walton Black
Herman Joseph Borneman, Ph.B.
Richard Elmer Edwin Campbell,
A.B.
Frank Lewis Chesley, Ph.B.
Arthur Freeman Crowell, A.B.
Peter Marshall Curry, A.B.
George Ronello Dolloff, A.B.
Lillian Catherine Dow, Ph.B.
Rudolph John Chauncey Fisher, A.B.
Margaret Ames Fuller, A.B.
Mary Amelia Gorman, A.B.
James Lawrence Hanley, A.B.
Marion Emsley Hawes, Ph.B.
Flora Mabel Hayes, A.B.
Samuel Heller
Bessie Higgins, Ph.B.
Elaine Virginia Hildrup, Ph.B.
Malcolm Cleveland Hylan, Ph.B.

Carl Oswald Lathrop, Sc.M.
Lorimer Douglas Milton
Irving Calvary Mitchell, Sc.B.
Mildred Morse, Ph.B.
Helen Axtell Mowry, A.B.
Edwin Michael Murphy
Theresa Regina O'Donnell, A.B.
Marie Louise Russell Raps, A.B.
William Francis Redding, Sc.B.
William John Ross, A.B.
Arthur Godfrey Sellen, Ph.B.
Rebecca Rogers Snow, Ph.B.
May Sperry, Ph.B.
Howard Wilson Tindall
Oliver Henry Toothaker, A.B.
Payson Waite Tucker, Ph.B.
Olive Collins White, A.B.
Edward Tracy Whitney, A.B.
Irene Hawes Williamson, Ph.B.
Frances Woodworth Wright, A.B.

MASTER OF SCIENCE

Clarence Raymond Adams, A.B.
Kenneth Livingston Burdon, Ph.B.
Alice Dimick, A.B.
Myron Whitmarsh Finch, Sc.B.
Robert Bruce Lindsay
Daniel Allan MacPherson

Louis Arthur Raymond Pieri
William Walker Russell, Ph.B.
Francis Lloyd Simons, Ph.B.
Edgar Jonathan Staff, A. M.
Leta Theresa Warnock, Sc.B.

DOCTOR OF PHILOSOPHY

Siji Chevung Hung, A.M.

THESIS: "Social and Political Developments in China since the Revolution."

Chester Lewis Knowles

THESIS: "The Preparation of Para Diphenyl Propiolic Acid."

Eda May Round, A.M.

THESIS: "The Carboniferous Flora of Rhode Island and its Probable Correlations."

DEGREES OUT OF COURSE

BACHELOR OF ARTS

Alfred Henry Gurney. *With the class of 1907*

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HONORARY DEGREES

CONFERRED BY THE BOARD OF FELLOWS

MASTER OF ARTS

ARTHUR EDWIN NORTON

HENRY DEXTER SHARPE

DOCTOR OF DIVINITY

CHARLES NATHANIEL ARBUCKLE

FRANK WARFIELD CROWDER

HARRY EMERSON FOSDICK

DOCTOR OF SCIENCE

ALEXIS CARREL

DOCTOR OF LAWS

HAROLD DEXTER HAZELTINE

VERNON LYMAN KELLOGG

FRANK ARTHUR VANDERLIP

WILLIAM GRANT VAN HORNE

LIST OF STUDENTS

GRADUATES

- Edgar Allen *St. Louis, Mo.*
Ph.B. (*Brown University*) 1915; A.M. (*Brown University*) 1916. Embryology and Histology, Physiology. Enrolled candidate for Ph.D.
- Richard Day Allen *Providence*
A.B. (*Brown University*) 1910; A.M. (*Brown University*) 1912. Education, Social Science. Enrolled candidate for Ph.D.
- Ruth Linda Allen *Edgewood*
A.B. (*Wellesley College*) 1905. English. Enrolled candidate for A.M.
- Abel Alexius Alquist *Providence*
A.B. (*Augustana College*) 1903; B.D. (*Augustana Theological Seminary*) 1909; A.M. (*Brown University*) 1916. Biblical Literature, Social Science. Enrolled candidate for Ph.D.
- Tracy William Ames *New London, Ct.*
Economics. English. Enrolled candidate for A.M.
- Mildred Evelyn Bassett *Greene*
A.B. (*Mount Holyoke College*) 1917. Education. Registered candidate for A.M.
- Dorothy Westervelt Bennett *Providence*
Ph.B. (*Brown University*) 1920. Education. Registered candidate for A.M.
- Merrill Kelley Bennett *Killingly, Ct.*
Ph.B. (*Brown University*) 1920. English, Romance Languages. Enrolled candidate for A.M.
- John Edward Blair *Worcester, Mass.*
A.B. (*Clark College*) 1920. Biology. Enrolled candidate for Sc.M.
- Alfred H. O. Boudreau *Providence*
A.B. (*Yale University*) 1914; LL.B. (*Harvard University*) 1917. Greek. Special graduate.
- Edith Steele Bowen *Providence*
A.B. (*Brown University*) 1920. Biology, Geology. Registered candidate for A.M.
- Benjamin Williams Brown *Danielson, Ct.*
A.B. (*Brown University*) 1919. English, Italian. Enrolled candidate for A.M.
- Kenneth Livingston Burdon *Providence*
Ph.B. (*Brown University*) 1918; Sc.M. (*Brown University*) 1920. Biology. Registered candidate for Ph.D.
- Joseph Butterworth, Jr. *Fall River, Mass.*
A.B. (*Brown University*) 1919. English. Enrolled candidate for A.M.
- May Bryan Carter *West Asheville, N. C.*
A.B. (*Meredith College*) 1918. Mathematics, Education. Enrolled candidate for A.M.
- Henry Everett Childs *East Providence*
Sc.B. (*University of Rochester*) 1916. Biology, Chemistry. Registered candidate for Sc.M.
- Chester Wellington Chinn *Riverside*
Ph.B. (*Brown University*) 1920. Biology. Enrolled candidate for A.M.
- James Andrew Clark *Providence*
Sc.B. (*Rhode Island State College*) 1917. Chemistry, French. Registered candidate for Sc.M.
- Rodney Esten Cook *Woonsocket*
Ph.B. (*Brown University*) 1920. Chemistry. Enrolled candidate for Sc.M.

- Percy Raymond Crosby *Pawtucket*
Sc.B. (*New Hampshire State College*) 1912; A.M. (*Brown University*) 1919. Education, Mathematics. Registered candidate for Ph.D.
- Peter Marshall Curry *Hamilton, Texas*
A.B. (*Baylor University*) 1918; A.M. (*Brown University*) 1920. Social Science, Philosophy. Registered candidate for Ph.D.
- Samuel Reed Damon *Kingston*
Ph.B. (*Brown University*) 1916; A.M. (*Brown University*) 1917. Bacteriology, Physiology. Enrolled candidate for Ph.D.
- John Christiano da Rosa *East Providence*
A.B., A.M. (*Brown University*) 1918. Biblical Literature, Social Science, Philosophy. Enrolled candidate for Ph.D.
- Eliza Jennetta Delaney *Providence*
A.B. (*Brown University*) 1905. Education. Registered candidate for A.M.
- Vladimir Triphon Dimitroff *North Scituate*
Ph.B. (*Brown University*) 1920. Biology, Botany, Biblical Literature. Enrolled candidate for A.M.
- Lillian Catherine Dow *Pawtucket*
Ph.B. (*Brown University*) 1918; A.M. (*Brown University*) 1920. History. Special graduate.
- Chester Miller Downing *Arctic*
Ph.B. (*Brown University*) 1918. Education. Registered candidate for A.M.
- Richard Owen Dummer *Providence*
Ph.B. (*Brown University*) 1904; A.M. (*Brown University*) 1905. Education. Special graduate.
- Rachel Tupper Easterbrooks *Newport*
A.B. (*Brown University*) 1920. Mathematics, Physics. Enrolled candidate for A.M.
- William Holden Eddy *Providence*
A.B. (*Brown University*) 1892; A.M. (*Brown University*) 1893; Ph.D. (*Brown University*) 1899. Education. Special graduate.
- Irving E. Fancher *Johnson City, N. Y.*
A.B. (*University of Syracuse*) 1915. History. Registered candidate for A.M.
- Elizabeth Constance Gallivan *Providence*
A.B. (*Trinity College*) 1920. Education. Enrolled candidate for A.M.
- Jacob Gellman *Providence*
A.B. (*College of the City of New York*) 1919. German, English, History. Registered candidate for A.M.
- Ernest De Witt Gilbert *Kokomo, Ind.*
A.B. (*Defiance College*) 1910. Biblical Literature. Special graduate.
- Arcadie Giura *New Bedford, Mass.*
Biology, Latin. Enrolled candidate for A.M.
- Albert Angus Griffin *Warren*
A.B. (*Brown University*) 1897. Education. Registered candidate for A.M.
- Samuel Marcus Gup *Mobile, Ala.*
A.B. (*University of Cincinnati*) 1914; A.M. (*University of Cincinnati*) 1915; Rabbi (*Hebrew Union College*) 1918. Biblical Literature. Enrolled candidate for Ph.D.
- William Worth Hall *Providence*
Chemistry, Physics. Enrolled candidate for A.M.
- James Lawrence Hanley *Providence*
A.B. (*Boston College*) 1919; A.M. (*Brown University*) 1920. Education. Registered candidate for Ph.D.

- Adelbert Hayes Harrington *Pontiac*
A.B. (*Olivet College*) 1901; A.M. (*Brown University*) 1919. Biblical Literature, Sociology, Philosophy. Registered candidate for Ph.D.
- Benjamin Malcolm Harris *Arlington*
A.B. (*Brown University*) 1913; B.D. (*Newton Theological Institute*) 1916; A.M. (*University of Vermont*) 1918. Philosophy, Biblical Literature. Registered candidate for Ph.D.
- Reginald Gordon Harris *Manchester, N. H.*
Ph.B., A.M. (*Brown University*) 1918. Biology. Registered candidate for Ph.D.
- Wesley Bigelow Harwood *Malone, N. Y.*
A.B. (*Harvard University*) 1920. Education. Special graduate.
- Constance McLean Hayden *North Providence*
A.B. (*Brown University*) 1920. Biology. Enrolled candidate for A.M.
- Charlotte Haywood *Lynn, Mass.*
A.B. (*Mount Holyoke College*) 1919. Biology, Chemistry. Enrolled candidate for A.M.
- Edward Lapham Hill *Assonet, Mass.*
Ph.B. (*Brown University*) 1912. Education. Enrolled candidate for A.M.
- James Beecher Hobbs *Bristol*
Ph.B. (*Brown University*) 1918. Educational Psychology, Romance Languages. Enrolled candidate for A.M.
- Donald Everett Hosmer *Pawtucket*
A.B. (*Dartmouth College*) 1916. Education, French, English. Enrolled candidate for A.M.
- Nathaniel Orson Howard *Providence*
Ph.B. (*Brown University*) 1903; Sc.M. (*Brown University*) 1917. Botany, Physiology. Registered candidate for Ph.D.
- Hope Louise Humes *East Providence*
Ph.B. (*Brown University*) 1919. Education. Registered candidate for A.M.
- Donald Rice Hylan *Springfield, Mass.*
Ph.B. (*Brown University*) 1920. Botany, Biology. Enrolled candidate for A.M.
- Willis Hobron Jeffery *Providence*
Ph.B. (*Brown University*) 1917. Biology, Chemistry. Enrolled candidate for Sc.M.
- Nathan Gardner Kingsley *Providence*
A.B. (*Union College*) 1882. Sociology, Education. Registered candidate for A.M.
- Beatrice Florence Kohlberg *Barrington*
Ph.B. (*Brown University*) 1912. Education. Enrolled candidate for A.M.
- Daniel Harrison Kulp *Pottstown, Pa.*
A.B., A.M. (*Brown University*) 1913. Sociology. Enrolled candidate for Ph.D.
- Lester Knox Little *Pawtucket*
A.B. (*Dartmouth College*) 1914. English, History, Philosophy. Enrolled candidate for A.M.
- Elmer Albert Love *Providence*
A.B. (*William Jewell College*) 1919. Biblical Literature, Social Science, Philosophy. Enrolled candidate for A.M.
- Margaret Ellen MacDonald *Greene*
A.B. (*Radcliffe College*) 1914. Education. Registered candidate for A.M.
- Nora Loretta Maguire *Providence*
A.B. (*Brown University*) 1904. Sociology. Special graduate.
- Mary Gladys Mahoney *Providence*
A.B. (*Brown University*) 1919. Education. Enrolled candidate for A.M.
- Samuel John Mann *Le Roy, N. Y.*
Ph.B. (*Brown University*) 1920. History. Enrolled candidate for A.M.

- Charles D. Maurer *Fall River, Mass.*
Ph.B. (*Wooster College*) 1915; S.T.B. (*Boston University School of Theology*) 1918;
M.R.E. (*Boston University*) 1919. Biblical Literature, Philosophy. Registered candi-
date for Ph.D.
- Grace Heath Maurer *Reading, Pa.*
A.B. (*Brown University*) 1920. History. Enrolled candidate for A.M.
- Frances Morrill Merriam *Morrill, Me.*
A.B. (*Brown University*) 1920. Mathematics. Registered candidate for A.M.
- Charles Warren Mesner *Central City, Neb.*
Sc.B. (*Nebraska Central College*) 1909; B.D. (*Hartford Theological Seminary*) 1912.
Philosophy. Special graduate.
- Hugh Miller *Berwick, N. S.*
Philosophy, French, German. Enrolled candidate for A.M.
- Robert Gale Noyes *Norwich, Ct.*
English, Philosophy. Enrolled candidate for A.M.
- Theresa Regina O'Donnell *Providence*
A.B. (*Trinity College*) 1919; A.M. (*Brown University*) 1920. Education. Registered can-
didate for Ph.D.
- Jenny Martha Palmer *Cranston*
A.B. (*Brown University*) 1914. Education. Enrolled candidate for A.M.
- Katharine Hopkins Pease *Burlington, Vt.*
Ph.B. (*University of Vermont*) 1920. English. Registered candidate for A.M.
- Harriet Ellen Perry *Providence*
A.B. (*Brown University*) 1920. Education. Registered candidate for A.M.
- Aaron Theophilus Peters *Newport*
S.T.B. (*Lincoln University*) 1916; B.D. (*Yale University*) 1917. Biblical Literature. En-
rolled candidate for A.M.
- Elsie Embley Pickles *Providence*
Ph.B. (*Brown University*) 1916. Biology. Special graduate.
- Louis Arthur Raymond Pieri *Franklin, Mass.*
Ph.B., Sc.M. (*Brown University*) 1920. Chemistry, Physics. Registered candidate for
Ph.D.
- Dorothy Preston *Providence*
Ph.B. (*Brown University*) 1920. Education. Enrolled candidate for A.M.
- Henry George Raps *Pawtucket*
Ph.B. (*Coe College*) 1905. Education. Enrolled candidate for A.M.
- Marie Louise Russell Raps *Pawtucket*
A.B. (*University of Tennessee*) 1910; A.M. (*Brown University*) 1920. Education. Special
graduate.
- Vesta Anna Richmond *Revere, Mass.*
A.B. (*Boston University*) 1914. Education. Registered candidate for A.M.
- Arthur Godfrey Sellen *Warren*
Ph.B. (*Brown University*) 1919; A.M. (*Brown University*) 1920. Biblical Literature,
Philosophy, Political Science. Registered candidate for Ph.D.
- Howard Franklin Shawcross *Greystone*
Ph.B. (*Brown University*) 1919. English. Enrolled candidate for A.M.
- Marcus Leon Sherin *Salem, Mass.*
Sc.B. (*Tufts College*) 1920. Physics. Special graduate.
- Carleton Southwick Spear *East Greenwich*
Sc.B. (*Wesleyan University*) 1919; Sc.M. (*Wesleyan University*) 1920. Chemistry, Bi-
ology. Registered candidate for Ph.D.

- Edgar Jonathan Staff *Providence*
Ph.B., A.M. (*Brown University*) 1916; Sc.M. (*Brown University*) 1920. Bacteriology, Biochemistry. Enrolled candidate for Ph.D.
- Ralph Evans Stanton *Providence*
Ph.B. (*Brown University*) 1920. Physiology, Bacteriology. Registered candidate for Ph.D.
- William Thurman Stanton *Waco, Texas*
A.B. (*Baylor College*) 1920. Sociology, Economics, History. Enrolled candidate for A.M.
- Mary Louise Strong *Dodgeville, Wis.*
LL.B. (*University of Wisconsin*) 1900; A.M. (*University of California*) 1915. Romance Languages. Special graduate.
- Ralph Randolph Strong *Bristol*
A.B. (*Yale University*) 1914. Education. Registered candidate for A.M.
- Charles Arthur Stuart *Plattsburgh, N. Y.*
Ph.B. (*Brown University*) 1919. Bacteriology, Physiology. Registered candidate for Ph.D.
- Franklin Barrett Taylor *Pawtucket*
A.B. (*Dartmouth College*) 1909. History, Spanish. Enrolled candidate for A.M.
- Lester Ralston Thomas *Avondale, Pa.*
Sc.B. (*Haverford College*) 1913. Education. Special graduate.
- Richard Nelson Thompson *Fall River, Mass.*
A.B. (*Cornell University*) 1919. Romance Languages. Registered candidate for A.M.
- Celia Tourtellot *Providence*
A.B. (*Wellesley College*) 1916. Education. Registered candidate for A.M.
- William Gould Vinal *Providence*
Sc.B. (*Harvard University*) 1906; A.M. (*Harvard University*) 1907. Biology, Botany. Enrolled candidate for Ph.D.
- Mrs. Harry Wachenheimer *Providence*
A.B. (*University of California*) 1903. English. Special graduate.
- Thomas Franklin Walsh *Providence*
Ph.D. (*University of Rome*) 1898. Education. Registered candidate for Ph.D.
- Chauncey Depew Wentworth *Long Island, Me.*
A.B. (*Brown University*) 1920. Mathematics, Physics. Enrolled candidate for A.M.
- Daniel Everett Whitford *Phenix*
A.B. (*Brown University*) 1920. Mathematics, Physics. Enrolled candidate for A.M.
- Magel Craig Wilder *Thornton*
A.B. (*Brown University*) 1919; Biology, Education. Enrolled candidate for A.M.
- Raymond Louis Wilder *Palmer, Mass.*
Ph.B. (*Brown University*) 1918. Mathematics. Enrolled candidate for Sc.M.
- Amasa Fitch Williston *Plainville, Mass.*
A.B. (*Brown University*) 1916; Sc.M. (*Brown University*) 1917. Education. Special graduate.
- James Walter Wilson *Providence*
Ph.B. (*Brown University*) 1918. Physiology, Comparative Anatomy. Enrolled candidate for Ph.D.
- Herbert Andrew Wisbey *Bristol*
Sc.B. (*Rhode Island State College*) 1917. Education. Registered candidate for A.M.
- Howard Douglas Wood *Newcastle, Mass.*
A.B. (*Bates College*) 1920. Education. Enrolled candidate for A.M.

UNDERGRADUATES
WITH THE DEGREES FOR WHICH THEY ARE
REGISTERED

[A. = A. B. P. = PH. B. S. = SC. B.]

SENIORS : CLASS OF 1921

NAME

RESIDENCE

Forbes Sampson Adam	P	<i>Canaan, Ct.</i>
George Henry Adams	P	<i>Lakewood, N. J.</i>
Granville Burns Affleck	P	<i>Yonkers, N. Y.</i>
John Wilmot Albright	P	<i>Rahway, N. J.</i>
Frank Alexander Ross Allen	P	<i>Pawtucket</i>
Robert Freeman Allison	P	<i>St. Johnsbury, Vt.</i>
Tracy William Ames	P	<i>New London, Ct.</i>
Charles Victor Andersen	P	<i>Framingham, Mass.</i>
Elmer George Armstrong	P	<i>Rahway, N. J.</i>
George Reginald Ashbey	A	<i>Norwich, Ct.</i>
Herbert Marston Bailey, Jr.	P	<i>Hackensack, N. J.</i>
Robert Reed Baldrige	A	<i>McKeesport, Pa.</i>
Robert Knight Bard	P	<i>Brooklyn, Ct.</i>
John Gardner Beagan	P	<i>Providence</i>
Thomas Bennardo	A	<i>Brooklyn, N. Y.</i>
George Bichwit	P	<i>Providence</i>
Mars Paul Bishop	P	<i>Chicago, Ill.</i>
Carl August Bjorklund	P	<i>Hingham, Mass.</i>
Francis Elmer Booth	P	<i>Cornwall, N. Y.</i>
Philip Pearce Borden	P	<i>Portsmouth, N. H.</i>
Harry Nickles Boureau	S	<i>Moorestown, N. J.</i>
Paul Theodore Brady, Jr.	A	<i>Palisade, N. J.</i>
James Edward Breslin	P	<i>Providence</i>
Howard George Brewer	S	<i>Cromwell, Ct.</i>
William Thomas Brightman, Jr.	S	<i>Dighton, Mass.</i>
Harry Turner Broadbent	S	<i>Providence</i>
Alfred Colvin Brooks	P	<i>Rahway, N. J.</i>
Earle Milton Brown	P	<i>Valley Falls</i>
William Robert Buerhaus	A	<i>Edgewood</i>
Stanton Albert Burdick	P	<i>Westerly</i>
Thomas Francis Burke	P	<i>Pawtucket</i>
Gordon Franklin Burr	A	<i>Providence</i>
Theodore Huggins Bush	P	<i>Malden, Mass.</i>
Floyd Warren Buswell	A	<i>Providence</i>
Caesar Thomas Cambio	P	<i>Providence</i>

NAME		RESIDENCE
Warren Russell Campbell	P	<i>North Cohasset, Mass.</i>
Marshall Hopewell Cannell	A	<i>Providence</i>
Michael Cantor	S	<i>Holyoke, Mass.</i>
Arthur Silvio Caputi	S	<i>Providence</i>
Louis Edwin Card	A	<i>Narragansett Pier</i>
John William Chapman	P	<i>Providence</i>
Edgar George Cochrane	P	<i>Providence</i>
Charles Leo Cohen	P	<i>Providence</i>
Morris Louis Cohen	A	<i>Providence</i>
Allan Bretterg Colby	S	<i>Providence</i>
Frederick Seth Collins	A	<i>Great Barrington, Mass.</i>
Hugh John Connelly	A	<i>Providence</i>
Richard Henry Coolidge	S	<i>Hartford, Ct.</i>
Walter Freeman Crawford	P	<i>Pawtucket</i>
William Henry Crawford	P	<i>Bridgeport, Ct.</i>
John Joseph Anthony Csepely	S	<i>Providence</i>
Christie Elston Cuddeback	P	<i>New York, N. Y.</i>
George Toomey Curry	P	<i>Providence</i>
Wesley Lawrence Dedrick	P	<i>Providence</i>
Robert Kellam Dewey	S	<i>New London, Ct.</i>
Harold Alpheus Dodge	P	<i>Westbrook, Me.</i>
Carlton Le Roy Dunham	P	<i>Plainfield, N. J.</i>
Charles Brayton Eddy	P	<i>Providence</i>
James Grosvenor Edmonds	A	<i>Pittsburgh, Pa.</i>
Nathan Willis Edson, 2d	P	<i>Lynn, Mass.</i>
Harold Richard Espey	P	<i>Scarsdale, N. Y.</i>
George Paul Farrell	A	<i>Pawtucket</i>
Harold Adam Faulkner	P	<i>East Providence</i>
Wayne Moody Faunce	S	<i>Providence</i>
Charles John Fish	P	<i>South Swansea, Mass.</i>
Lawrence Rogers Foote	P	<i>Pawtucket</i>
Harry Alexander Forman	S	<i>Attleboro, Mass.</i>
Stuart Forstall	P	<i>Montclair, N. J.</i>
Alex Freed	P	<i>New Haven, Ct.</i>
Delbert Orrison Fuller	P	<i>Liberty, Me.</i>
Rufus Clinton Fuller, Jr.	P	<i>Providence</i>
Henry Ezra Gallup	P	<i>Danielson, Ct.</i>
Lawrence Outhit Gates	P	<i>Providence</i>
David Duncan Gilchrist, Jr.	S	<i>Summit, N. J.</i>
Paul Abraham Gipfel	A	<i>Newark, N. J.</i>
Arcadie Giura	A	<i>New Bedford, Mass.</i>
Mordecai Glaubman	P	<i>Providence</i>
Leon Goldberg	A	<i>Providence</i>

SENIORS : CLASS OF 1921

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NAME

RESIDENCE

Frank Oswald Green	A	<i>Pawtucket</i>
Flint Grinnell	P	<i>Norwood, Mass.</i>
Abram Evan Gwynne	P	<i>New York, N. Y.</i>
William Worth Hall	P	<i>Providence</i>
Herbert Leonard Hambleton	P	<i>Goffstown, N. H.</i>
Samuel Mills Harris	P	<i>Providence</i>
Elmer Raymond Hering	P	<i>Hackensack, N. J.</i>
Frederick Weston Hoffman	S	<i>Pawtucket</i>
Frank Joseph Honan	P	<i>Providence</i>
Walter Hoving	P	<i>New York, N. Y.</i>
Donald Washburn Hurd	S	<i>Westbrook, Me.</i>
Fred Lorin Itschner	S	<i>Waterbury, Ct.</i>
Eric Pearson Jackson	A	<i>Fall River, Mass.</i>
Roger Peirce Jenks	P	<i>Middleboro, Mass.</i>
Kenneth Dewey Johnson	A	<i>East Milton, Mass.</i>
Joseph Charles Johnston	P	<i>Providence</i>
Russell Phillips Jones	A	<i>Edgewood</i>
Edward Roscoe Kent	S	<i>Providence</i>
Reginald Stevens Kimball	A	<i>Newport</i>
Ralph Chase Knight	S	<i>Newburyport, Mass.</i>
Edward Milton Kolman	P	<i>Providence</i>
Russell Adrian Lane	P	<i>Baltimore, Md.</i>
Russell Ernest Larkin	P	<i>Georgetown, Mass.</i>
Walter Berger Leonard	P	<i>Providence</i>
Fred Alton Lougee	S	<i>St. Johnsbury, Vt.</i>
Frank Cartin Lynch	P	<i>Somerset, Mass.</i>
Benjamin William McKendall	P	<i>Providence</i>
Robert Charles McKenny	P	<i>Trenton, N. J.</i>
George Kenneth Macdonald	P	<i>East Providence</i>
Bentley Mackintosh	P	<i>Sharon, Mass.</i>
Ernest Stuart Macmillan	P	<i>Pawtucket</i>
George Peabody Macready, Jr.	A	<i>Providence</i>
Harold Einar Magnuson	P	<i>Pontiac</i>
Joseph Barakat Makanna	P	<i>Bangor, Me.</i>
Herbert Harold Marks	A	<i>Providence</i>
Francis Paul Massaniso	P	<i>Providence</i>
Vincent Millard Meserve	S	<i>Cranston</i>
Hugh Miller	P	<i>Berwick, N. S.</i>
Coe Stanley Mills	S	<i>Sussex, N. J.</i>
Harold Chester Mills	P	<i>Pawtucket</i>
Elbridge Alden Minard	A	<i>Dorchester, Mass.</i>
Alfred Mochau	A	<i>East Hartford, Ct.</i>
John Joseph Muccio	P	<i>Lymansville</i>

NAME		RESIDENCE
Daniel Boyle Murphy	A	<i>Brooklyn, N. Y.</i>
William James Nairn	A	<i>Providence</i>
Joel Martin Nichols, Jr.	P	<i>Attleboro, Mass.</i>
Mark Alvin Nickerson	S	<i>Pawtucket</i>
Robert Gale Noyes	A	<i>Norwich, Ct.</i>
Edward Gerard O'Connor	A	<i>Providence</i>
Olof Gustaf Oden	P	<i>Providence</i>
Raymond Ellsworth Palmer	P	<i>Pawtucket</i>
Frederick Roger Paty	P	<i>Plymouth, Mass.</i>
Reginald Marcy Pease	S	<i>Providence</i>
Henry Wilfred Peterson	P	<i>Quincy, Mass.</i>
Edward Judson Phelps	P	<i>Rockland, Mass.</i>
Maurice Mitchell Pike	A	<i>Providence</i>
Daniel Rogers Pinkham	P	<i>Lynn, Mass.</i>
George William Potter	P	<i>Fall River, Mass.</i>
Harrison Delano Ricketson	P	<i>New Bedford, Mass.</i>
Gordon Wolcott Roaf	S	<i>Newburyport, Mass.</i>
William Bowman Robinson	A	<i>Providence</i>
Edward Bertie Ryder, Jr.	S	<i>Plainfield, N. J.</i>
Jonas Sallet	P	<i>Attleboro, Mass.</i>
Henry Tritton Samson	P	<i>New York, N. Y.</i>
Seneca Gadsden Samson	P	<i>New York, N. Y.</i>
James Chester Scott	P	<i>Philipsburg, Pa.</i>
Harold Lincoln Sheldon	S	<i>Phenix</i>
Abraham Israel Shulman	S	<i>Providence</i>
Harold Stanton Smith	P	<i>Needham, Mass.</i>
Norman Britton Sowell	P	<i>Providence</i>
Myles Standish	P	<i>Providence</i>
Ralph De Lille Standish	P	<i>Hanover, Ct.</i>
Howard Bucknell Stearns	A	<i>Providence</i>
John Randolph Stevens	P	<i>Providence</i>
Raymond Somers Stites	P	<i>East Orange, N. J.</i>
Henry Newell Sunderland	P	<i>Fall River, Mass.</i>
Everett Leprilete Sweet	P	<i>Providence</i>
Edwin Lewis Thornton	P	<i>Pawtucket</i>
Harold Lauren Tinker	A	<i>Nashua, N. H.</i>
William Anthony Towle, Jr.	P	<i>Newburyport, Mass.</i>
Maynard Jones Wartman	P	<i>Providence</i>
Gaston Maurice Weinstein	P	<i>New York, N. Y.</i>
Robert Joseph Welsh	P	<i>Eaton, Ohio</i>
Herbert Alexander West	P	<i>Hopkinton, Mass.</i>
John Josiah White, Jr.	P	<i>Atlantic City, N. J.</i>
William Walter Wilcox, Jr.	A	<i>Asbury Park, N. J.</i>

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NAME		RESIDENCE
Jay Mayo Williams	P	<i>Monmouth, Ill.</i>
Eske Harry Windsberg	P	<i>New Bedford, Mass.</i>
Knowlton Mead Woodin	P	<i>Brattleboro, Vt.</i>
Earl Wright Woodruff	A	<i>Howell, Mich.</i>
Elmer Parker Wright	P	<i>Auburn</i>
Woodworth Wright	P	<i>Providence</i>
Harold Ballard Yeaton	P	<i>Darien, Ct.</i>
Howell Thomas Young	A	<i>Providence</i>
Peter Paul Zubrisky	P	<i>Providence</i>

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Joseph Adam	P	<i>Framingham, Mass.</i>
Richard Warren Allen	S	<i>Wickford</i>
Ernest Ludlow Bainton	S	<i>Providence</i>
Warren Edward Baker	P	<i>Providence</i>
Milton Marcus Bates	P	<i>Lynn, Mass.</i>
Fred Baurenfeind	S	<i>Glen Head, N. Y.</i>
Joseph Edward Beagan	P	<i>Providence</i>
Francis Crane Bidwell	P	<i>Norwich, Ct.</i>
Arthur Edwin Bjorklund	P	<i>Hingham, Mass.</i>
William Brayton Irving Blake	P	<i>Quincy, Mass.</i>
James Robert Bland	S	<i>Providence</i>
Paul Bernard Blocher, Jr.	P	<i>Jersey City, N. J.</i>
Leo Edward Bonoff	P	<i>Madison, Ct.</i>
Douglas Pierson Boyd	P	<i>Lee, Mass.</i>
Frederick William Brack	P	<i>South Norwalk, Ct.</i>
William Henry Bromage	P	<i>Thompsonville, Ct.</i>
Frederick Gregory Brown	A	<i>Newburgh, N. Y.</i>
Kendrick Benjamin Brown	P	<i>Naugatuck, Ct.</i>
Philip Meader Brown	A	<i>Providence</i>
Roland Daniel Brown	S	<i>Colchester, Ct.</i>
Ralph Sawyer Brown	P	<i>Brookline, Mass.</i>
Edward Albert Bullock	A	<i>Central Falls</i>
Laurin Dudley Bumpus	P	<i>Providence</i>
Robert Joseph Burgh	A	<i>Westbrook, Me.</i>
Martin Campbell	S	<i>Newark, N. J.</i>
Herbert Alton Chaffee	P	<i>Seekonk, Mass.</i>
Paul Maynard Chalmers	A	<i>Lansdowne, Pa.</i>
Warren Temple Chandler	P	<i>St. Louis, Mo.</i>
John Alden Chesebro	P	<i>Providence</i>
Louis Spaulding Chick	P	<i>Boston, Mass.</i>
Earl Fairchild Connett	P	<i>Morristown, N. J.</i>

NAME		RESIDENCE
Robert Lewis Cooke, Jr.	A	<i>Attleboro, Mass.</i>
Ralph Warren Copeland	A	<i>Campello, Mass.</i>
Thomas Gardiner Corcoran	A	<i>Pawtucket</i>
Clifford Thomas Crowther	P	<i>Pawtucket</i>
Howard Crouje Cummings	P	<i>West Springfield, Mass.</i>
Alfred James Curry	P	<i>Providence</i>
Walter Machray Daniels	P	<i>Providence</i>
Austin Morris Davies	P	<i>Conshohocken, Pa.</i>
Charles Emerson Davis	P	<i>Edgewood</i>
George Dawson, Jr.	S	<i>Providence</i>
Edward William Day	P	<i>Meshanticut</i>
Lawrence Strout Day	P	<i>Melrose, Mass.</i>
Harold Eugene Deady	S	<i>Providence</i>
Cornelius Robinson de Goey	P	<i>Providence</i>
Louis Leo Destremps	P	<i>Pittsfield, Mass.</i>
John Bowman Dick	P	<i>Pawtucket</i>
Thomas Walton Doyle	P	<i>Providence</i>
Samuel Joseph Dreyer	P	<i>Canton, Ohio</i>
Jesse Elting DuBois	P	<i>New Paltz, N. Y.</i>
Arthur Chester Durfee	P	<i>Fall River, Mass.</i>
Harold Gibbs Eastman	P	<i>Hartford, Ct.</i>
Clarence Manton Eddy	A	<i>Providence</i>
Allen Ashbey Edgcomb	A	<i>East Providence</i>
Harold Marion Edwards	P	<i>Elmhurst, N. Y.</i>
Harold Lamprey Ellsworth	P	<i>Edgewood</i>
Franklin Charles Eteson	P	<i>Fitchburg, Mass.</i>
Raymond Joseph Farrell	P	<i>Central Falls</i>
John Eric Warwick Fawcett	P	<i>Youngstown, Ohio</i>
Arthur Henry Feiner	A	<i>Providence</i>
William Joseph FitzGibbon	P	<i>New York, N. Y.</i>
Walton Clark Forstall	P	<i>Montclair, N. J.</i>
Albert Edwin Fowler, Jr.	P	<i>Newburyport, Mass.</i>
Arthur Jensing Frey	P	<i>Atlantic City, N. J.</i>
Alvin Almy Gaffney	A	<i>Fall River, Mass.</i>
Ellsworth Gale	P	<i>Pawtucket</i>
Bruce Stuart Gilchrist	P	<i>Lynn, Mass.</i>
Milton Hugh Glover	P	<i>Boston, Mass.</i>
Raymond Frank Goodman	A	<i>Providence</i>
Avon Douglas Green	P	<i>Lynn, Mass.</i>
Richard Deming Greene	P	<i>Providence</i>
Russell Harris Greene	P	<i>Barrington</i>
William Chace Greene, Jr.	P	<i>Providence</i>
Herbert Reginald Grimshaw	S	<i>Rutherford, N. J.</i>

NAME		RESIDENCE
Saul Sidney Grossman	P	<i>Providence</i>
Charles James Guild	P	<i>Attleboro, Mass.</i>
Delphis Victor Guillemette	S	<i>Pawtucket</i>
John Thomas Hackett	P	<i>Bristol</i>
John Barr Harvie	P	<i>Rutherford, N. J.</i>
Edward Joseph Haskell	P	<i>Providence</i>
Floriman Mason Hathaway	P	<i>West Paris, Me.</i>
Walter Hills Hibbard	P	<i>Manchester, Ct.</i>
Walter Stanley Holt	P	<i>Providence</i>
Charles Hopkins	A	<i>Chepachet</i>
Clarence Beechmont Howard	P	<i>Worcester, Mass.</i>
William Marshall Howard	P	<i>Malone, N. Y.</i>
Ernest Icaza	P	<i>Panama City, Panama</i>
Henry Isé	S	<i>Providence</i>
Wilson Carl Jansen	P	<i>Hartford, Ct.</i>
Walter Hicks Jillson	S	<i>Turner's Falls, Mass.</i>
Howard Fessenden Johnson	S	<i>Providence</i>
George Colgan Johnstone	P	<i>New York, N. Y.</i>
Robert Vechten Jones	S	<i>Sherwood Park, N. Y.</i>
Howard Allison Kenyon	P	<i>Sterling, Ct.</i>
George Lapchianjian	P	<i>Pawtucket</i>
Lawrence Solon Larry	P	<i>Washington, D. C.</i>
Charles Theodore Lazure	P	<i>New York, N. Y.</i>
Bertrand Mulloy Lewis	P	<i>Waterbury, Ct.</i>
Floyd Wellington Libby	P	<i>Westbrook, Me.</i>
Scott Dickson Libby	P	<i>South Hamilton, Mass.</i>
Robert Marston Lingham	P	<i>Newton Highlands, Mass.</i>
Frank Browning Littlefield	P	<i>Natick</i>
Richard Webster Littlefield	P	<i>Natick</i>
Richard Eldredge Lyman, Jr.	P	<i>Providence</i>
Lloyd Pirce McAllister	P	<i>Media, Pa.</i>
Barnaby McAuslan	P	<i>Providence</i>
Earl Stanley McColley	P	<i>Providence</i>
Herbert Elden MacCombie	A	<i>Stoughton, Mass.</i>
Ernest Winfred McCormick	P	<i>South Manchester, Ct.</i>
John Harrison McCraw	P	<i>New London, Ct.</i>
Norman Everett McKay	P	<i>Auburn</i>
Henry Mulholland McKelvie	P	<i>Fall River, Mass.</i>
Harry Lincoln MacKenzie	P	<i>Lynnfield, Mass.</i>
Robert Beede Macdougall	A	<i>Wellesley, Mass.</i>
Henry Madowsky	P	<i>Fall River, Mass.</i>
Harold Bassett Mallory	P	<i>West Springfield, Pa.</i>
Paul Manchester	P	<i>Providence</i>

NAME		RESIDENCE
Charles Edwin Mangan	P	<i>Pawtucket</i>
William Arthur Marks	P	<i>Providence</i>
Hyman Samuel Mayerson	A	<i>Woonsocket</i>
Arthur Francis Merewether	P	<i>East Providence</i>
Gilbert Follansbee Merrill	P	<i>Malden, Mass.</i>
Arthur Edward Miller	A	<i>Narragansett Pier</i>
John Douglas Mitchell	P	<i>Providence</i>
Harold Nicholas Molter	P	<i>Providence</i>
Arthur Blair Moody, Jr.	A	<i>Providence</i>
Robert William Moxham	P	<i>Rutherford, N. J.</i>
Roger Waldemar Nelson	P	<i>Quincy, Mass.</i>
Chapin Slater Newhard	P	<i>St. Louis, Mo.</i>
Kenneth Henry Nichols Newton	A	<i>Providence</i>
Winfield Eugene Ohlson	P	<i>Worcester, Mass.</i>
Edward Standish Palmer	P	<i>Providence</i>
Walter Nelson Palmquist	S	<i>Providence</i>
William Paxton	P	<i>Chicago, Ill.</i>
Joseph Eliot Peckham	P	<i>West Medford, Mass.</i>
Aurelius Dewey Pinckney	P	<i>Augusta, Ga.</i>
Charles Hacker Pinkham	A	<i>Lynn, Mass.</i>
Harold Leroy Pittenger	S	<i>Trenton, N. J.</i>
William Posey	P	<i>Peekskill, N. Y.</i>
Horace Boss Pray	P	<i>Pawtucket</i>
Edward Rees	P	<i>Girard, Ohio</i>
Thomas Gideon Reid	P	<i>Peabody, Mass.</i>
Samuel Watson Remington, Jr.	P	<i>Providence</i>
Raymond Thomas Rich	A	<i>Hingham, Mass.</i>
Joseph Wilbur Riker	P	<i>Newark, N. J.</i>
William Edward Rogers	P	<i>Morristown, N. J.</i>
Reginald Ivan Rose	A	<i>Baltic, Ct.</i>
Leo Henry Rosen	P	<i>Providence</i>
Stanton Lynk Rowley	P	<i>Newton Centre, Mass.</i>
Alexander Gaddis Russell	P	<i>Red Bank, N. J.</i>
Sedgwick Rusling Ryno	P	<i>Rahway, N. J.</i>
William Eugene Ryon, Jr.	S	<i>Stonington, Ct.</i>
Cecil Paul Sansom	P	<i>La Grange, Mo.</i>
William Kirk Schanck	P	<i>Trenton, N. J.</i>
John Schneider	P	<i>Hebron, No. Dak.</i>
William Seaman	A	<i>Providence</i>
William Hood Shupert	S	<i>Ardmore, Pa.</i>
Bertrand Leslie Shurtleff	P	<i>Adamsville</i>
George Thomas Slavin	P	<i>East Providence</i>
Gordon Drew Smith	P	<i>Glen Ridge, N. J.</i>

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NAME		RESIDENCE
Arthur Davison Somes	S	<i>Otis, Mass.</i>
Arnon Lyon Squiers, Jr.	P	<i>Brooklyn, N. Y.</i>
Chester Sides Stackpole	P	<i>Peabody, Mass.</i>
Raymond Perry Studley	A	<i>Providence</i>
Theodore Lawton Sweet	P	<i>Providence</i>
Carl Irving Taber	P	<i>Centreville</i>
Albion Freedom Tripp	P	<i>Newport, Vt.</i>
Stuart Hayward Tucker	A	<i>Providence</i>
Rodney Johnson Underwood	S	<i>Hingham, Mass.</i>
Angelo George Valentino	A	<i>Providence</i>
Elmer Archer Wagner	P	<i>Ballston Spa, N. Y.</i>
Willard Mowry Walcott	A	<i>Greenville</i>
Edwin Chase Walmsley	P	<i>Pawtucket</i>
Carl Henry Wardwell	S	<i>Bluehill, Me.</i>
George Heber Webb, Jr.	P	<i>Providence</i>
Sherman Wells, Jr.	A	<i>Tacoma, Wash.</i>
Lawrence Whitcomb	P	<i>Brookline, Mass.</i>
Alfred Lincoln Whittemore	P	<i>South Hadley Falls, Mass.</i>
Clarence Edward Winsor	P	<i>Plainfield, Ct.</i>

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Robert Parker Adams	P	<i>Chestnut Hill, Mass.</i>
Robert Matile Addoms	P	<i>Cranford, N. J.</i>
Theodore Barton Akeley	A	<i>Presque Isle, Me.</i>
Everett Robert Alden	P	<i>Rahway, N. J.</i>
Francis Otis Allen, Jr.	P	<i>Providence</i>
Joseph Chester Allen	P	<i>Pawtucket</i>
Richard Almy	P	<i>Auburn</i>
Justin Meredith Andrews	P	<i>Rocky Hill, Ct.</i>
William Gailor Anibal	P	<i>Saratoga, N. Y.</i>
Charles Herbert Appleby	P	<i>Glen Cove, N. Y.</i>
John Bayles Applegate	P	<i>Hoboken, N. J.</i>
Robert Alden Appleton	P	<i>Pawtucket</i>
Donald Davis Armstrong	P	<i>Providence</i>
Robert Lee Baker, Jr.	P	<i>Jacksonville, Fla.</i>
Robert Smith Barker	S	<i>Seekonk, Mass.</i>
Edward Fletcher Barrows	P	<i>Brattleboro, Vt.</i>
Dwight Kellogg Bartlett, Jr.	P	<i>Glen Ridge, N. J.</i>
Charles Beattie	P	<i>Watervliet, N. Y.</i>
Frederic Newman Beede	P	<i>Pawtucket</i>
Roger Vassar Bellmore	P	<i>Plattsburgh, N. Y.</i>
Clarence Edwin Bennett	P	<i>Lakewood</i>

NAME		RESIDENCE
Edmund Joseph Bennett	P	<i>North Providence</i>
Newell Walcott Bishop	P	<i>Pawtucket</i>
Kenneth Pond Blake	P	<i>Lexington, Mass.</i>
Robert Gordon Bleakney	S	<i>Hyde Park, Mass.</i>
Paul Eddy Boughton	S	<i>Poughkeepsie, N. Y.</i>
Otis Fanning Boynton	A	<i>South Portland, Me.</i>
Edwin Croston Brady	P	<i>Providence</i>
Charles Arthur Braitsch	A	<i>Providence</i>
Edward Calvin Bratcher	P	<i>Ekron, Ky.</i>
Gilbert Egert Broking	P	<i>Bronxville, N. Y.</i>
Donald Proctor Brown	P	<i>Danvers, Mass.</i>
Philip Chace Brown	S	<i>Providence</i>
James Davenport Bryden	P	<i>Dorranceton, Pa.</i>
William Linton Bulkeley	P	<i>Danbury, Ct.</i>
William Hodnett Butler	P	<i>Fall River, Mass.</i>
Charles Harrington Cahill	S	<i>Fall River, Mass.</i>
John Warren Campbell	S	<i>Fall River, Mass.</i>
Robert Nelson Carr	P	<i>Elizabeth, N. J.</i>
Robert Emmett Carrigan	P	<i>Meredith, N. H.</i>
Joseph Frederick Starr Carter	P	<i>Asbury Park, N. J.</i>
Edward Joseph Chaloux	P	<i>Watervliet, N. Y.</i>
Clinton George Clough	P	<i>Lakewood</i>
Stedman Roby Coe	P	<i>New York, N. Y.</i>
Edwin Asbury Cole, Jr.	P	<i>Housatonic, Mass.</i>
Howard Warren Comstock	P	<i>Fall River, Mass.</i>
John Francis Connelly	P	<i>North Brookfield, Mass.</i>
Halsey Stuart Connett	P	<i>Newark, N. J.</i>
Stuart Pullman West Cooke	P	<i>Providence</i>
Robert Ball Coons	P	<i>Ballston Spa, N. Y.</i>
Philip Hugh Cox	P	<i>Montclair, N. J.</i>
Robert Bindloss Cruise	S	<i>New London, Ct.</i>
William Michael Cushman	P	<i>Washington, D. C.</i>
Judson James Cutler	P	<i>Lynn, Mass.</i>
George Ivison Dana	P	<i>Canton, Mass.</i>
Milton Engley Davis	S	<i>Foxboro, Mass.</i>
Clarence Raymond Day	S	<i>Shirley Mills, Me.</i>
Eliphalet John Decker	P	<i>La Grange, Me.</i>
George Rogers Decker	P	<i>La Grange, Me.</i>
Charles Thomas Dempsey	P	<i>Thompsonville, Ct.</i>
Domenico Thomas De Simone	S	<i>Providence</i>
William Dighton	P	<i>Monticello, Ill.</i>
Norman Dine	P	<i>Lynn, Mass.</i>
Walter Irving Dolbeare	P	<i>Brookline, Mass.</i>

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NAME		RESIDENCE
Robert Francis Dube	P	<i>Fall River, Mass.</i>
Frank Benjamin Durfey, 2d	P	<i>Jewett City, Ct.</i>
Thomas Benjamin Dustin	P	<i>West Wareham, Mass.</i>
Joseph Sydney Eisenberg	A	<i>Woonsocket</i>
Lawrence Cornelius Elmendorf	P	<i>Lakewood, N. J.</i>
Joseph William Emsley	P	<i>Methuen, Mass.</i>
Vladimir Nicholawitch Engalitcheff	P	<i>New York, N. Y.</i>
Frank Edwin Fahlquist	S	<i>Providence</i>
Howard Leavitt Fales	S	<i>Wrentham, Mass.</i>
Herbert Shepard Familton	S	<i>Brooklyn, N. Y.</i>
Homer Ramsdell Faulkner	S	<i>Brighton, Mass.</i>
Paul Feely	P	<i>Woonsocket</i>
Walter Fenner, Jr.	P	<i>Providence</i>
Philip Finegold	A	<i>Providence</i>
Jerome Layton Fisher	P	<i>Providence</i>
Alfred Langdon Fitzgerald	P	<i>New London, Ct.</i>
Arthur Stephen Fox	P	<i>Great Barrington, Mass.</i>
Carroll Lee Freeman	S	<i>Providence</i>
Warren Theodore Frohock	A	<i>Auburn</i>
John Leonard Gäerste	P	<i>Curaçao, Dutch West Indies</i>
Cecil Gladstone Garland	P	<i>Rockland, Me.</i>
Millard Thayer Gaskill	P	<i>Hopedale, Mass.</i>
George Henry Gates	P	<i>Ivoryton, Ct.</i>
Robert Henry Girvin, Jr.	S	<i>Hopedale, Mass.</i>
Kenneth Prescott Gleason	P	<i>Warren, N. H.</i>
Alfred Livingston Goddard	P	<i>Lowell, Mass.</i>
Louis Bliss Goff	P	<i>Providence</i>
Edmond Goldstein	P	<i>Providence</i>
Guillermo Enrique González	P	<i>Sonturce, P. R.</i>
Edward Joseph Gorman, Jr.	P	<i>Holyoke, Mass.</i>
Ralph Drayton Greene	P	<i>River Point</i>
Jacob Greenstein	A	<i>Providence</i>
Kalei Kaonohi Gregory	P	<i>Kailua, Hawaii</i>
Artcher Estabrook Griffin	P	<i>Taunton, Mass.</i>
Albert Lippitt Mason Gross	A	<i>Melrose, Mass.</i>
Frank Lester Gross	P	<i>New York, N. Y.</i>
Eugene Frederick Grunewald	P	<i>Brooklyn, N. Y.</i>
Mianese Gulian	P	<i>Newton, Mass.</i>
Thomas Richard Hadfield	S	<i>Lawrence, Mass.</i>
James Henry Hagan, Jr.	A	<i>Providence</i>
Edgar Hayes Hammond, Jr.	P	<i>Providence</i>
LeRoy Weeden Hart	S	<i>Providence</i>
Harold Hassell	P	<i>Providence</i>

NAME		RESIDENCE
Walter Page Hatch	P	<i>Edgewood</i>
Alden Farrelly Hays	P	<i>St. Louis, Mo.</i>
Victor Andrew Hedberg, Jr.	P	<i>Waterbury, Ct.</i>
William Garland Heeks	A	<i>Concord Junction, Mass.</i>
Wallace Howard Henshaw	S	<i>Suffield, Ct.</i>
Edward Hallsted Hewitson	P	<i>Edgewood</i>
Daniel Chase Hey, Jr.	A	<i>East Providence</i>
Donald Ives Higley	P	<i>Branford, Ct.</i>
Robert Bennett Hiller, Jr.	P	<i>Marion, Mass.</i>
Paul Leon Holmgren	P	<i>Englewood, N. J.</i>
Percival Hopwood	P	<i>New York, N. Y.</i>
Charles Edwin Horne, Jr.	S	<i>Millbury, Mass.</i>
Roger Fales Horton	S	<i>Edgewood</i>
Lincoln Hamblen Howe	P	<i>Westbrook, Me.</i>
Nelson Cottrell Hoxsie, Jr.	P	<i>Gilbertville, Mass.</i>
Ralph Wellington Hughes	P	<i>East Lynn, Mass.</i>
Edward Ainslie Hummel	S	<i>Woonsocket</i>
Theodore Roosevelt Jeffers	A	<i>Peabody, Mass.</i>
Willard Brownell Jewell	P	<i>Little Compton</i>
Charles Roger Johnson	P	<i>Lynn, Mass.</i>
Willard Forest Johnson	A	<i>Camden, N. J.</i>
Francis Leland Jones	A	<i>Greenfield, Mass.</i>
John Davis Edmands Jones, Jr.	A	<i>Providence</i>
Elmer Roy Joslyn	P	<i>Lebanon, N. H.</i>
Morris Samuel Kantrowitz	P	<i>Fall River, Mass.</i>
Frank Edward Killian	P	<i>Providence</i>
Mortimer Jacob Klingon	P	<i>Colchester, Ct.</i>
Samuel Max Klivansky	P	<i>Lynn, Mass.</i>
Wilfred Ernest Kneeland	S	<i>Newburyport, Mass.</i>
Lester Kriebel Kriebel	A	<i>Lansdale, Pa.</i>
Myron Urban Lamb	P	<i>Portland, Me.</i>
Lawrence Lanpher	P	<i>Glen Ridge, N. J.</i>
Albert Smith Larrabee	A	<i>Lakewood, N. J.</i>
Edward Noble Larrabee	A	<i>Roslindale, Mass.</i>
Arvid Norlander Larson	S	<i>New Britain, Ct.</i>
Harold Knut Larson	P	<i>Pawtucket</i>
Norman Lester Lawrence	P	<i>Quinton, N. J.</i>
Raymond Carl Lawson	S	<i>East Haven, Ct.</i>
George Vincent Leddy	P	<i>Red Bank, N. J.</i>
Vernon Alden Libby	P	<i>Pittsfield, Me.</i>
Edward Winslow Lincoln	A	<i>Barrington</i>
Wallace Lisbon	P	<i>Providence</i>
Robert Cushing Litchfield	P	<i>Bridgeport, Ct.</i>

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NAME		RESIDENCE
John Willard Lohnas	P	<i>Saratoga Springs, N. Y.</i>
Anthony Joseph Loiacono	P	<i>New London, Ct.</i>
Josiah Lubin	P	<i>Worcester, Mass.</i>
Albert Otto Lundin	P	<i>Providence</i>
Ernest Lyon Lynn	P	<i>Providence</i>
John Francis Lyons	P	<i>Providence</i>
Lawrence Anthony McCarthy	A	<i>Pawtucket</i>
Robert Lee McCarty, Jr.	P	<i>McKeesport, Pa.</i>
Stephen Arthur McClellan	S	<i>Washington, D. C.</i>
William Best McCormick	P	<i>Providence</i>
Burton Ross McCumber	S	<i>Elizabeth, N. J.</i>
John James McDonald	P	<i>East Providence</i>
Thomas James McGovern	P	<i>North Attleboro, Mass.</i>
Walter Kilgore Macfarlane	P	<i>Seattle, Wash.</i>
Joseph Wilkes Mackenzie	P	<i>Trenton, N. J.</i>
Spencer Talmon Manser	S	<i>Woodridge, N. J.</i>
Carl Eaton Martin	A	<i>Union Village, Vt.</i>
Allen Randall Mathues	P	<i>Media, Pa.</i>
Robert Osmond Meader	P	<i>Auburn</i>
Horace Messer Mechem	P	<i>Battle Creek, Mich.</i>
Earl Whitney Milligan	S	<i>Saylesville</i>
Olcott Griswold Mills	P	<i>Westerly</i>
Samuel Byron Milton	P	<i>Washington, D. C.</i>
Richard Henry Morrissey	P	<i>Dalton, Mass.</i>
Eben Paine Morse	P	<i>Hackensack, N. J.</i>
Clifford Hollis Mosher	S	<i>Providence</i>
William Calvin Munroe	P	<i>Peabody, Mass.</i>
Howard Hughes Murphy	P	<i>Baltimore, Md.</i>
Charles Nathanson	P	<i>Central Falls</i>
Algot Reginald Nelson	A	<i>Providence</i>
Arthur Remsen Nelson	A	<i>Brooklyn, N. Y.</i>
Milton Powell Newsome	P	<i>Newark, N. J.</i>
George Storms Newton	P	<i>Superior, Wis.</i>
George Raymond Nichol	P	<i>Providence</i>
George Henry Nichols	P	<i>Wollaston, Mass.</i>
John Joseph O'Brien, Jr.	P	<i>River Point</i>
Thomas Joseph O'Daly, Jr.	P	<i>Dorchester, Mass.</i>
Leo Joseph O'Donnell	P	<i>Woonsocket</i>
John Edward O'Neil	A	<i>Providence</i>
James Francis O'Rourke	A	<i>Providence</i>
Norman Justin Paasche	P	<i>Medford, Mass.</i>
Clifford Alpheus Packard	P	<i>Rockland, Mass.</i>
Forrest Freese Paige	P	<i>Hardwick, Mass.</i>

BROWN UNIVERSITY

NAME		RESIDENCE
George Henry Parker, Jr.	P	<i>Providence</i>
John Selden Parker	S	<i>Providence</i>
Henry Thurston Patch	P	<i>Boston, Mass.</i>
William Richard Perillo	P	<i>Brooklyn, N. Y.</i>
Rivhall Perry	P	<i>Providence</i>
Edward Badstue Petersen	P	<i>Poughkeepsie, N. Y.</i>
Fergus Beattie Purves	P	<i>Hartford, Ct.</i>
Israel Rabinovitz	A	<i>Woonsocket</i>
Louis Lorenzo Redding	A	<i>Wilmington, Del.</i>
John Curtis Reed	A	<i>Morristown, N. J.</i>
Hugh Francis Rennie	P	<i>Wilmington, Del.</i>
Harry Howard Reynolds	P	<i>Providence</i>
Harvey Sweet Reynolds	A	<i>Providence</i>
Clarence Lyman Rice	P	<i>Palmer, Mass.</i>
Laurence Ayers Rice	P	<i>Cambridge, Mass.</i>
Earle Wilson Rogers	P	<i>Fiskville</i>
George John Romieu	P	<i>Thompsonville, Ct.</i>
Willan Charles Roux	P	<i>East Orange N. J.</i>
Donald Clarke Rubel	A	<i>New York, N. Y.</i>
Joseph Bonaparte Rumsey	P	<i>Coudersport, Pa.</i>
Robert Joseph Russell, Jr.	A	<i>Uxbridge, Mass.</i>
Roland Gustav Saacke	P	<i>Providence</i>
Agostino Sammartino	A	<i>Providence</i>
Carl Oscar Samuelson	P	<i>South Ryegate, Vt.</i>
William Douglas Savage	P	<i>Brooklyn, N. Y.</i>
Leonard Perkins Sayles	A	<i>Chepachet</i>
Albert John Senior	P	<i>New York, N. Y.</i>
William Kenneth Sheehan	A	<i>Pelham Manor, N. Y.</i>
Kenneth Paul Sheldon	P	<i>Auburn, N. Y.</i>
Bernhard Louis Simmons	P	<i>Worcester, Mass.</i>
Willard Simon	P	<i>Youngstown, Ohio</i>
Albert Nathaniel Sjoberg	P	<i>Auburn</i>
Edward Shaw Skillings	P	<i>Portland, Me.</i>
George Washington Smith	S	<i>Port Chester, N. Y.</i>
Richard Carroll Smith	P	<i>Providence</i>
Ronald Bancroft Smith	A	<i>Providence</i>
Rolf Einar Soderback	S	<i>Providence</i>
Charles Soforenko	P	<i>Fall River, Mass.</i>
Robert Harris Spellman	P	<i>Somers, Ct.</i>
Francis Marshall Sprague	P	<i>South Weymouth, Mass.</i>
Philip Edwin Stanley	A	<i>Birmingham, Pa.</i>
Philip Edward Starrett	P	<i>Athol, Mass.</i>
Noyes Colburn Stickney	S	<i>Keene, N. H.</i>

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NAME		RESIDENCE
Harold Lomas Summerfield	P	<i>Providence</i>
Stuart Fairchild Terrill	S	<i>Brookfield Centre, Ct.</i>
George Frederick Thibodeau	S	<i>Newport, N. H.</i>
Dwight Hawes Thomas	P	<i>Reading, Mass.</i>
Don Carlos Thorndike	P	<i>Auburn</i>
Marcus Alvah Tinker	P	<i>Nashua, N. H.</i>
Abel Stuart Tinkham	S	<i>Taunton, Mass.</i>
Alvin Chalmers Toner	P	<i>Lonsdale</i>
John Francis Trainor	S	<i>Fall River, Mass.</i>
Daniel Vincent Troppoli	A	<i>Providence</i>
Samuel Hubert Turkington	A	<i>Three Rivers, Mass.</i>
John Norman Tyler	S	<i>Deep River, Ct.</i>
Herbert Erwin Van Hoesen	P	<i>Providence</i>
Walter Ihmt Waldau	A	<i>Englewood, N. J.</i>
William John Walsh	A	<i>Providence</i>
Philip Albro Welch	A	<i>Providence</i>
Heber Edward Wharton	P	<i>Baltimore, Md.</i>
Alfred Edmund Whitehouse, Jr.	P	<i>Westwood, N. J.</i>
John Hutchinson Whorf	P	<i>Wellfleet, Mass.</i>
Robert Thomas Williams	P	<i>Central Falls</i>
John Andrew Wilson	A	<i>Jersey City, N. J.</i>
Paul Knight Wilson	P	<i>West Somerville, Mass.</i>
Nathan Winograd	P	<i>Fall River, Mass.</i>
Michael Wofsey	P	<i>Stamford, Ct.</i>
Jarvis Clinton Worden	P	<i>Exeter</i>
John Wyman Worthington	P	<i>East Hampton, Ct.</i>
William Chesley Worthington	A	<i>Providence</i>
Vincent York	P	<i>Rangeley, Me.</i>
Harold Herbert Young	P	<i>Providence</i>
Ivan Merrill Young	P	<i>New York, N. Y.</i>

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Carlton James Aldrich	S	<i>Woonsocket</i>
George Harold Alexander	P	<i>Pawtucket</i>
Joseph Henry Alexander	P	<i>Ballston Spa, N. Y.</i>
Cornelius Nevins Allen, Jr.	A	<i>Hopewell, N. J.</i>
Stanley Edward Ames	P	<i>Saranac Lake, N. Y.</i>
Eugene Eric Anderson	A	<i>Providence</i>
Richard Houghton Annan	P	<i>Providence</i>
Charles Russell Athern	P	<i>Providence</i>
Erwin Aymar	S	<i>Providence</i>
Frederick Wanton Babcock	P	<i>Providence</i>

BROWN UNIVERSITY

NAME		RESIDENCE
Harry Justus Baldwin	S	<i>Colebrook, N. H.</i>
James Henry Barrett	P	<i>Port Chester, N. Y.</i>
Hilton St. John Barry	S	<i>Newark, N. J.</i>
Charles Seagrave Barton	P	<i>Uxbridge, Mass.</i>
Armando Emilio Batastini	S	<i>Providence</i>
Gerald Wright Behan	P	<i>Lansdowne, Pa.</i>
Roger Palmer Behan	P	<i>Lansdowne, Pa.</i>
Arthur Randall Beil	S	<i>Youngstown, Ohio</i>
Gerald Webb Bennett	P	<i>Colorado Springs, Col.</i>
Robert McKinley Bent	S	<i>Lynn, Mass.</i>
Harry Bernard	S	<i>Pawtucket</i>
Walter Bernard	P	<i>Pawtucket</i>
Malcolm Lockwood Berrian	P	<i>Greenwich, Ct.</i>
Richard Pang-Nien Bien	S	<i>Tientsin, China</i>
Bruce MacMillan Bigelow	P	<i>Norwood</i>
Gordon Edward Bigelow	P	<i>Norwood</i>
Ernest Wade Bishop	A	<i>Taunton</i>
Henry Mortimer Bodwell	A	<i>Phenix</i>
Parker Hamilton Brady	S	<i>Providence</i>
John Malcolm Brogden	P	<i>Providence</i>
Edward Coolidge Brooks	P	<i>Colorado Springs, Col.</i>
Everett Mills Brooks	S	<i>Auburndale, Mass.</i>
Herbert Anthony Broyderick	P	<i>Lynn, Mass.</i>
Arthur Lyle Budlong	P	<i>Washington, D. C.</i>
Charles George Burgess	S	<i>Providence</i>
Clarence Abram Burrell	P	<i>Asbury Park, N. J.</i>
Morris Earl Burt	P	<i>Nashua, N. H.</i>
Frederick Seibert Butterweck	P	<i>Allentown, Pa.</i>
Maurice Hilliard Caldwell	P	<i>Providence</i>
Luigi Capasso	A	<i>Providence</i>
Harold Simmons Carr	S	<i>Oneco, Ct.</i>
Albert James Chafe	A	<i>Roxbury, Mass.</i>
Clarence Chaffee	P	<i>Rumford</i>
Everett Spencer Child	S	<i>Barrington</i>
Amaldo William Ciccone	A	<i>Providence</i>
William Clair	P	<i>Sea Bright, N. J.</i>
Prentiss Stammers Colburn	A	<i>Hyde Park, Mass.</i>
Roger Carter Conant	P	<i>Auburn, Me.</i>
Arlan Ralph Coolidge	P	<i>Orange, Mass.</i>
Edward Ranger Coop	S	<i>Providence</i>
George Cossock	P	<i>Providence</i>
John Fielder Cotton	A	<i>Providence</i>
Robert Henry Cowing	P	<i>Newtonville, Mass.</i>

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NAME		RESIDENCE
Albert Jacob Cramer	P	<i>Stamford, Ct.</i>
Cornelius Cronin	P	<i>Wheelwright, Mass.</i>
Austin Joseph Crowley	P	<i>Providence</i>
Orville Francis Cullerton	P	<i>Chicago, Ill.</i>
Curtis Frank Dalton	P	<i>Winchester, Mass.</i>
Clinton DeBaun, Jr.	P	<i>Woodcliffe Lake, N. J.</i>
Edward Harold Delaney	P	<i>Naugatuck, Ct.</i>
Alfred Frederick DeMilia	P	<i>Stamford, Ct.</i>
Alfred Fisk Dewing, Jr.	P	<i>Providence</i>
Edgar Lyle Donnelly	P	<i>Southampton, N. Y.</i>
John Patrick Doyle	P	<i>New York, N. Y.</i>
Earle Clinton Drake	A	<i>Brockton, Mass.</i>
René Francis Dunne	P	<i>Weehawken, N. J.</i>
Floyd Grey Dusingberre	P	<i>Port Washington, N. Y.</i>
William Allan Dyer, Jr.	P	<i>Syracuse, N. Y.</i>
Ralph Greydon English	P	<i>Providence</i>
Elmer Gustave Ericson	P	<i>Waterbury, Ct.</i>
Robert Lloyd Fair	P	<i>Hoboken, N. J.</i>
Walter Reynolds Farley	S	<i>Erie, Pa.</i>
Frederick Gail Fellowes	A	<i>Exeter, N. H.</i>
Robert Fellowes	P	<i>Exeter, N. H.</i>
Carl Read Filmer	S	<i>Greene</i>
Mark Randolph Flather	S	<i>Nashua, N. H.</i>
William Fletcher, Jr.	P	<i>Providence</i>
Charles Minot Fogg	S	<i>Uniontown, Pa.</i>
George Francis Foley	P	<i>Fall River, Mass.</i>
Horace Ely Forsyth	S	<i>Bay Head, N. J.</i>
Howard Nelson Fowler	P	<i>Mansfield, Mass.</i>
Julius Freedman	P	<i>Dorchester, Mass.</i>
Robert Billups Freeman	S	<i>Providence</i>
Jacob Friedman	P	<i>Providence</i>
Marinus Charles Galanti	P	<i>Lodi, N. J.</i>
Charles Frederick Gardner	S	<i>Providence</i>
Milton Gerrish	P	<i>Mansfield, Mass.</i>
Albert Frederick Goff	P	<i>Providence</i>
Carleton Goff	P	<i>Providence</i>
Robert Hathaway Goff	P	<i>Providence</i>
Milton Goldberger	A	<i>Providence</i>
Robert Alvan Goodell	P	<i>North Brooksville, Me.</i>
Joseph Goodman	P	<i>Pawtucket</i>
Hans Jordan Gottlieb	P	<i>Milford, N. J.</i>
Stuart Dorchman Goulding	P	<i>East Providence</i>
Sydney Norman Gourse	A	<i>Fall River, Mass.</i>

NAME		RESIDENCE
Donald Livingstone Grant	P	<i>Brookline, Mass.</i>
Denison Warner Greene	P	<i>Providence</i>
George Donald Guthrie	P	<i>Taunton, Mass.</i>
Ivan Half	A	<i>Pittsburgh, Pa.</i>
Edward Wayne Harlow	P	<i>Rockland, Mass.</i>
Roger Donald Harvey	P	<i>Milford, Ct.</i>
Louis Edmund Hathaway, Jr.	A	<i>Fall River, Mass.</i>
Thaddeus Jerome Hayden, Jr.	P	<i>North Providence</i>
Wesley Barnes Hayward	P	<i>Providence</i>
Wyndham Hayward	A	<i>Wickford</i>
George Edward Heddy	P	<i>Suffern, N. Y.</i>
Clinton Leroy Henry	P	<i>Asbury Park, N. J.</i>
William Arnold Herridge	P	<i>Dover, N. J.</i>
Clark Abraham Heydon	P	<i>Hackensack, N. J.</i>
Jacques George Hill	P	<i>Allendale, N. J.</i>
William George Hirschfeld	S	<i>Ridgefield Park, N. J.</i>
Everett Winslow Hobart	P	<i>Cincinnati, Ohio</i>
Dempster Lloyd Hobron	P	<i>Niantic, Ct.</i>
Charles Edwin Hopkins	P	<i>Plainfield, Ct.</i>
Richard William Horsefield	P	<i>Morristown, N. J.</i>
Edward Andrew Hosp	S	<i>Newark, N. J.</i>
Francis Olney Hough	P	<i>New York, N. Y.</i>
Henry Howard, 2d	P	<i>Providence</i>
Alfred Oldfield Hudson	S	<i>Yonkers, N. Y.</i>
George Halsey Hunt	A	<i>New York, N. Y.</i>
Hubert George Huntley	S	<i>Northport, N. Y.</i>
Robert Greene Inman	A	<i>Belmont, Mass.</i>
Ernest Elmore Intlehouse	A	<i>Providence</i>
John Randolph Jellison	P	<i>Bar Harbor, Me.</i>
Malcolm Allan Jenckes	P	<i>Providence</i>
Edward Daniel Jenkins	P	<i>Dover, N. J.</i>
Earle Vincent Johnson	A	<i>Chicago, Ill.</i>
George Clarence Johnson	P	<i>Providence</i>
David Leslie Jones	P	<i>Chicago, Ill.</i>
Russell Mathew Kendall	P	<i>Montclair, N. J.</i>
Everard Carl Ketcham	P	<i>Brooklyn, N. Y.</i>
Alfred Krellberg	P	<i>New York, N. Y.</i>
Clayton Selleck Kuhn	P	<i>Bethel, Ct.</i>
Carl Joseph Lalumia	P	<i>Lodi, N. J.</i>
Herbert Day Lamson	P	<i>Exeter, N. H.</i>
Anthony Louis Laudati	P	<i>Peekskill, N. Y.</i>
William Laurens	A	<i>Fall River, Mass.</i>
Earle Freman Leach	P	<i>East Bluehill, Me.</i>

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NAME		RESIDENCE
Max Levin	A	<i>Providence</i>
Waldemar John Loacker	P	<i>Seattle, Wash.</i>
Robinson Carr Locke	P	<i>Beverly Hills, Cal.</i>
Edgar John Lownes, Jr.	P	<i>Providence</i>
Fordyce Remsen Lozier	S	<i>Hackensack, N. J.</i>
Josiah Lubin	P	<i>Worcester, Mass.</i>
Giacinto Andrea Lubrano	P	<i>Auburn</i>
John Root Lyman	P	<i>Providence</i>
Clyde Jacobs McAbee	P	<i>Versailles, Pa.</i>
Charles Alexander MacCausland	P	<i>Trudeau, N. Y.</i>
Clifford Charles McCreight	P	<i>Fort Dodge, Iowa</i>
Andrew Meredith MacDowell	S	<i>Point Pleasant, N. J.</i>
Roy Lawrence McGregor	P	<i>Providence</i>
George Manly	P	<i>Hardwick, Mass.</i>
William Reynolds Manning	P	<i>Wilmington, Del.</i>
Arthur Earle Marley	P	<i>Providence</i>
Raymond Harold Maurice	P	<i>New York, N. Y.</i>
Robert Mazet, Jr.	P	<i>Brooklyn, N. Y.</i>
Joseph Fustado Medeiros, Jr.	A	<i>Fall River, Mass.</i>
George Perkins Merchant	P	<i>Gloucester, Mass.</i>
Austin John Merkel	P	<i>Chicago, Ill.</i>
Kern DeLos Metzger	A	<i>Cleveland, Ohio</i>
David Alan Midgley	P	<i>Arlington</i>
Frank Lindsey Milan	S	<i>Swan's Island, Me.</i>
Raymond Lowe Miller	P	<i>Pawtuxet</i>
John James Monk	P	<i>Fort Dodge, Iowa</i>
Harold Douglas Moore	S	<i>Auburn, Me.</i>
Harold Roy Moorhouse	P	<i>East Bridgewater, Mass.</i>
William Moran	S	<i>Providence</i>
Courtney Malcolm Morgan	A	<i>Providence</i>
Charles Henry Morhouse	P	<i>Ticonderoga, N. Y.</i>
Edward Wellington Morris	A	<i>Providence</i>
Albert Rynders Mount	P	<i>Cranford, N. J.</i>
Albert Edgerton Mulliken	S	<i>Pelham, N. Y.</i>
Thomas James Murphy	P	<i>Brooklyn, N. Y.</i>
Skillman Earl Myers	P	<i>Trenton, N. J.</i>
George Montgomery Newton	P	<i>Sparta, Wis.</i>
Francis Lawrence Nichols	P	<i>Brattleboro, Vt.</i>
Russell Lathrop Norton	P	<i>Willimantic, Ct.</i>
Joe Nutter	P	<i>Falls City, Neb.</i>
John Edward O'Brien	P	<i>Providence</i>
Ernest Augustus Oakes, Jr.	P	<i>New Bedford, Mass.</i>
Isaac Orlansky	A	<i>Providence</i>

NAME		RESIDENCE
Arthur Worthington Packard	P	<i>Dorchester, Mass.</i>
Wesby Reed Parker	A	<i>Oak Park, Ill.</i>
Albert Edwin Parsons	P	<i>East Milton, Mass.</i>
Bernard Harry Payton	P	<i>Providence</i>
William Avery Perkins	P	<i>Providence</i>
Douglas Colin Pettigrew	A	<i>Newton Centre, Mass.</i>
Frank Joseph Piscopo	P	<i>Winthrop, Mass.</i>
Edward Ringrose Place	P	<i>East Randolph, Vt.</i>
Samuel Albert Place	P	<i>Providence</i>
Abraham Edward Pobirs	A	<i>Providence</i>
McIntyre Albert Prescott	A	<i>Shreveport, La.</i>
Albert Abraham Proctor	A	<i>Providence</i>
Howard Erwin Quimby	P	<i>Windsor, Vt.</i>
Bernard Joseph Quinlan	P	<i>Mansfield, Mass.</i>
Francis Brae Rafferty	P	<i>Willimantic, Ct.</i>
Hoyt Webber Randolph	S	<i>Rumney, N. H.</i>
William Dent Reichmann	P	<i>Kenilworth, Ill.</i>
William Irving Reid	P	<i>Pawtucket</i>
Quentin James Reynolds	P	<i>Brooklyn, N. Y.</i>
Byron Ulysses Richards, Jr.	P	<i>Pawtucket</i>
Frank Purves Ring	P	<i>Edgewood</i>
Stanley Smith Robinson	P	<i>Worcester, Mass.</i>
Robert Franklin Rodman, Jr.	P	<i>Lafayette</i>
George Elmer Roegner	S	<i>Providence</i>
Alfred Moorehead Rogers, Jr.	S	<i>New Rochelle, N. Y.</i>
Lionel Solomon Rosenberg	P	<i>Providence</i>
Paul Veneer Rothenberger	P	<i>Napoleon, Ohio</i>
Warren Faunce Sanford	P	<i>Fall River, Mass.</i>
William Herbert Sargeant	P	<i>Attleboro, Mass.</i>
Norman Williams Saunders	S	<i>Providence</i>
Philip Saunders, Jr.	A	<i>Streator, Ill.</i>
George Sauté	P	<i>Centreville</i>
Ernest Frederic Schmults	P	<i>New York, N. Y.</i>
William Henry Schofield	S	<i>Brooklyn, N. Y.</i>
Carleton Scott	S	<i>Providence</i>
George Wilson Sharp	P	<i>Providence</i>
Wilfred Cuddeback Shattuck	P	<i>Lincoln Park, N. J.</i>
Harry Shulman	A	<i>Providence</i>
Nathan Benjamin Silberman	P	<i>Stamford, Ct.</i>
James Henry Sims	P	<i>Slatersville</i>
Arthur Francis Smith	P	<i>Brookline, Mass.</i>
Edward Manton Smith	P	<i>West Barrington</i>
Gordon Harding Smith	P	<i>Brookline, Mass.</i>

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NAME		RESIDENCE
Hancel Bechtel Smith	A	<i>Cleveland, Ohio</i>
Harold Joseph Smith	S	<i>Plainfield, N. H.</i>
Ralph Christie Smith	P	<i>Cincinnati, Ohio</i>
Walton Mowry Smith	P	<i>Warren</i>
Carl Albert Snow	P	<i>Rockland, Me.</i>
Paul Longyear Snyder	P	<i>Kingston, N. Y.</i>
Robert Edward Soellner	P	<i>Schenectady, N. Y.</i>
Herbert James Somers	S	<i>Lynn, Mass.</i>
Frederick Robert Spates, Jr.	P	<i>Westboro, Mass.</i>
John Franklin Spellman	S	<i>Somers, Ct.</i>
Carleton Lewis Staples	P	<i>Taunton, Mass.</i>
Milton Edward Staples	P	<i>Providence</i>
Charles Sumner Stedman, Jr.	A	<i>Albany, N. Y.</i>
Mervin Edwin Stevens	P	<i>Claremont, N. H.</i>
Roland Milton Stoneback	A	<i>Springtown, Pa.</i>
Arthur Robinette Storm	A	<i>Hackensack, N. J.</i>
Robert Gallup Sturtevant	A	<i>Albany, N. Y.</i>
Charles Herbert Taylor, Jr.	A	<i>East Providence</i>
Edgar Glover Tibbetts	P	<i>Ballston Spa, N. Y.</i>
Henry Whitford Tilden	A	<i>Manchester, Ct.</i>
Albert Sise Tufts	S	<i>Pinehurst, N. C.</i>
Bartlett Monroe Van Note	P	<i>Highland Falls, N. Y.</i>
Norman Pearl Vickery	P	<i>North Cohasset, Mass.</i>
Lester Russell Warren	P	<i>Brooklyn, N. Y.</i>
Herman Edward Wealcatch	P	<i>Paterson, N. J.</i>
Miles Cutler Webb	P	<i>West Brookfield, Mass.</i>
Robert Pegram Webb	P	<i>Newport</i>
Walter Weber	S	<i>Elizabeth, N. J.</i>
George Weiss	P	<i>Stamford, Ct.</i>
Edward Joseph West	P	<i>Edgewood</i>
Russell West	P	<i>Longmeadow</i>
Paul Duliver Wilbur	P	<i>Danbury, Ct.</i>
Samuel Everett Wilkins, Jr.	A	<i>Providence</i>
Samuel Herbert Willard	P	<i>Bryn Mawr, Pa.</i>
Earl Clifton Wilson	S	<i>Pawtucket</i>
Ernest John Woelfel	P	<i>Peabody, Mass.</i>
William Harmon Wolford, Jr.	P	<i>Schoharie, N. Y.</i>
David Jerome Wolper	P	<i>New York, N. Y.</i>
Arthur Robertson Woodburne	P	<i>Hartford, Ct.</i>
Everett Clarence Woodburne	P	<i>Hartford, Ct.</i>
Robert Medill Woods	P	<i>Sewickley, Pa.</i>
Charles Norris Young	P	<i>Providence</i>
Ferdinand Eugene Zegri	P	<i>Brooklyn, N. Y.</i>

SPECIAL STUDENTS

NAME	RESIDENCE
John Emil Almfeldt	<i>Providence</i>
Thomas Joseph Bassett	<i>Providence</i>
Dana Read Bellows	<i>Pawtucket</i>
Samuel Helmont Berger	<i>Providence</i>
Stanley Thayer Black	<i>Pawtucket</i>
Kurwin Robert Boyes	<i>Providence</i>
Leo Francis Boylan	<i>Providence</i>
Don Theron Burnett	<i>Attleboro, Mass.</i>
Raymond Holbrook Burton	<i>Providence</i>
Robert Frederic Cahill	<i>Cincinnati, Ohio</i>
Glenn Lee Carey	<i>Laconia, N. H.</i>
Gunnar Stark August Carlsson	<i>Ljungbyholm, Sweden</i>
Nathaniel Borden Chase	<i>Central Falls</i>
Edward Anthony Cooney	<i>Providence</i>
Thomas Coffin Crosby	<i>Duluth, Minn.</i>
James Matthew Dalton	<i>Providence</i>
John Rolfe Denman	<i>Cranford, N. J.</i>
John Huntington Devereux	<i>Northfield, Vt.</i>
Allan Aloysius Farrell	<i>Providence</i>
Frank Curtis Fish	<i>Providence</i>
Samuel Vaughton Fletcher	<i>Brooklyn, N. Y.</i>
Lloyd Elisha Gallup	<i>Waterford, Ct.</i>
Ralph Leete Gardner	<i>Salersville, Ky.</i>
Lester Edmond Gavitt	<i>Westerly</i>
Edmund John Gleazer	<i>Providence</i>
Alphonse Gogreve	<i>Cincinnati, Ohio</i>
Aaron Roberts Goodall	<i>Cincinnati, Ohio</i>
Sayles Gorham	<i>Providence</i>
Edward Robert Granniss	<i>New Haven, Ct.</i>
Carl Augustus Greene	<i>Providence</i>
Harold Lee Grindle	<i>Arlington, N. Y.</i>
William Joseph Harper	<i>Riverpoint</i>
Harry William Heinrich	<i>Cleveland, Ohio</i>
Leonard Miller Hinson	<i>Brookline, Mass.</i>
Gustav Desiré Houtmann	<i>Manville</i>
Haroutune Hratchia	<i>Providence</i>
Albert Brown Jeffers	<i>Central Falls</i>
Malcolm Johnson	<i>Weston, Mass.</i>
Howard William Jones	<i>Youngstown, Ohio</i>
Charles Dewey Koechling	<i>Pawtucket</i>
Alpha Anson Learned	<i>Providence</i>

SPECIAL STUDENTS

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NAME	RESIDENCE
William Andros Lester, Jr.	<i>Edgewood</i>
Arthur Killam Litchfield	<i>Bridgeport, Ct.</i>
Thomas Henry Luther	<i>Providence</i>
William Michael McDermott	<i>Providence</i>
Alfred Russell Mack	<i>Pawtucket</i>
Henry Francis Manchester, Jr.	<i>Providence</i>
Kenilworth Hillery Mathus	<i>Edgewood</i>
Robert Langdon Meyers	<i>Asbury Park, N. J.</i>
Gilbert DeBlois Miller	<i>Providence</i>
Herbert Francis Mills	<i>Lynn, Mass.</i>
Lootfe Minas	<i>Medford, Mass.</i>
John Francis Murphy	<i>Lynn, Mass.</i>
John Francis Murphy	<i>Woonsocket</i>
John Augustine O'Neill	<i>Pawtucket</i>
Edmund Freeman Ormsbee	<i>Mill River, Mass.</i>
Kenneth Vrest Orton	<i>Athol, Mass.</i>
Harlan Berkley Peabody	<i>Providence</i>
Harold William Pearce	<i>East Providence</i>
John Everett Pierce	<i>Enfield, N. H.</i>
William Vaughan Polleys, Jr.	<i>Providence</i>
William Brainard Prentiss	<i>New Haven, Ct.</i>
John Francis Quinn, Jr.	<i>Pawtucket</i>
James Andrew Reilly	<i>Providence</i>
Frederic William Roberts	<i>Hope</i>
John James Rock	<i>Providence</i>
Charles Lester Scanlon	<i>Providence</i>
Joseph Wechster Scharf	<i>Brooklyn, N. Y.</i>
Wernert Jacques Schuler	<i>New Bedford, Mass.</i>
Peter Leo Simonini	<i>Providence</i>
Melvin Adams Stephens	<i>West Somerville, Mass.</i>
Fred Elmore Sweet	<i>Providence</i>
Richard Thorndike	<i>Auburn</i>
Walter Winfred Vandal	<i>Pawtucket</i>
Ralph Merritt Wallace	<i>East Providence</i>
Jerome Anthony Walsh	<i>Oneonta, N. Y.</i>
Samuel Hudson Walsh, Jr.	<i>Putnam, Ct.</i>
Stanley George Warner	<i>Peterborough, N. H.</i>
Jerome West	<i>Longmeadow</i>
Howard Osmond Wills	<i>Akron, Ohio</i>

APPENDIX

THE BROWN UNIVERSITY TEACHERS' ASSOCIATION

THE Brown University Teachers' Association was organized in 1903. The purpose of the Association is "first, to further the mutual interests of Brown University and the schools preparing students therefor; and second, to promote the welfare of the Alumni of the University who are teachers." The eighteenth annual meeting of the Association was held at Brown University on Saturday, March 13, 1920.

OFFICERS FOR 1920-21

President: HENRY THATCHER FOWLER, PH.D., *Professor of Biblical Literature and History, Brown University.*

Vice-Presidents: JOHN CAMPBELL SWIFT, A.B., *First Assistant, English High School, Providence;* ASA CLINTON CROWELL, PH.D., *Associate Professor of the Germanic Languages and Literatures, Brown University.*

Secretary: CLAUS EMANUEL EKSTROM, A.B., *Instructor in Department of Education, Brown University.*

Treasurer: CLARENCE HARTWELL MANCHESTER, A.M., *Vice-Principal, Technical High School, Providence.*

Executive Committee: THE PRESIDENT OF THE UNIVERSITY AND THE OFFICERS OF THE ASSOCIATION, *ex officio*; MRS. HARRIET P. FULLER, A.M., *First Assistant, Classical High School, Providence;* WILLIAM H. EDDY, PH.D., *Assistant Superintendent of Schools, Providence;* PERCY R. CROSBY, A.M., *First Assistant, Pawtucket High School.*

THE RHODE ISLAND ALPHA OF THE PHI BETA KAPPA SOCIETY ‡

OFFICERS AND COMMITTEES FOR 1920-21

President: PROFESSOR WALTER COCHRANE BRONSON, LITT.D.

Vice-President: HERBERT AMBROSE RICE, A.M.

Secretary: PROFESSOR WILLIAM THOMSON HASTINGS, A.M.

Treasurer: WILLIAM WASHBURN MOSS, A.M.

Historian: PROFESSOR WILFRED HAROLD MUNRO, L.H.D.

‡ For the Women's Organization of the Phi Beta Kappa Society, see page 276.

Committee on Alumni and Honorary Membership: ALEXANDER MANLIUS BURGESS, M.D., Professor ROBERT FOSTER CHAMBERS, PH.D., ZECHARIAH CHAFFEE, JR., A.B., the Secretary, *ex officio*.

Committee on Arrangements: THE PRESIDENT, *ex officio*, NATHANIEL HOWLAND GIFFORD, M.D., WILLIAM HENRY CAMFIELD, A.B.

Committee on New Chapters: Professor WILLIAM THOMSON HASTINGS, A.M., Professor NATHANIEL FRENCH DAVIS, LL.D., GEORGE LELAND MINER, A.B.

Committee on Nomination of Officers: FRANK HAIL BROWN, A.B., CHARLES ABBOT PHILLIPS, A.B., REV. CHARLES ALBERT MEADER, A.B.

Auditor: CLAUDE RAYMOND BRANCH, A.B.

MEN ELECTED IN 1920

Alumni: ALBERT DAVIS BOSSON, '75, JOSEPH LEISHMAN PEACOCK, '00.

Seniors: VICTOR FREEMAN ADAMS, JOHN ROBERT CALDOW, WALLACE BROGA, KELHAM DOVE, IRVING AUGUSTINE FARRELL, MARSHALL NAIRNE FULTON, PAUL RUPERT GAST, SETH BRAYTON GIFFORD, GEORGE WASHINGTON GRIMM, JR., FREDERIC WILLIAM LATHROP, VERNON CHARLES MANLEY, SAMUEL JOHN MANN, HAROLD AUGUSTINE PHELPS, SAMUEL SHEFELMAN, RICHMOND LATHROP WATSON, CHAUNCEY DEPEW WENTWORTH, DANIEL EVERETT WHITFORD, ELMER STUART WOODWARD.

Juniors: THOMAS CORCORAN GUNNING, HAROLD EINAR MAGNUSON, ROBERT GALE NOYES.

THE BROWN CHAPTER OF THE SOCIETY OF THE SIGMA XI

Students who have taken at least fifty-two semester hours in pure or applied science are, in their Senior year, eligible to membership in the honorary scientific society, Sigma Xi, provided that they "have given promise of marked ability in those lines of work which it is the object of the Society to promote."

OFFICERS AND COMMITTEES FOR 1920-21

President: Professor PHILIP HENRY MITCHELL, PH.D.

Vice-President: Professor ROBERT FOSTER CHAMBERS, PH.D.

Secretary: Professor THEODORE HENRY BROWN, PH.D.

Treasurer: Professor CLINTON HARVEY CURRIER, A.M.

Auditor: Professor RAYMOND CLARE ARCHIBALD, PH.D.

Board of Electors: Professor OTIS EVERETT RANDALL, PH.D., Professor ALBERT DEFOREST PALMER, PH.D., Professor ARTHUR EUGENE WATSON, PH.D., Professor CHARLES WILSON BROWN, A.M., Professor HERBERT EUGENE WALTER, PH.D., Professor ROWLAND GEORGE DWIGHT RICHARDSON, PH.D., Professor

JOHN EDWARD HILL, SC.D., Professor JAMES ALEXANDER HALL, SC.B., Professor SAMUEL TOMLINSON ARNOLD, PH.D.

Entertainment Committee: Professor SAMUEL TOMLINSON ARNOLD, PH.D., Professor SYDNEY WILMOT, A.M., FREDERICK NEALE TOMPKINS, SC.B.

MEMBERS ELECTED IN 1920

Graduate Students: HELEN AXTEL MOWRY, MAGEL CRAIG WILDER, KENNETH LIVINGSTON BURDON, MINOT JOY CROWELL, SAMUEL REED DAMON, CHARLES ARTHUR STUART.

Seniors: RACHEL TUPPER EASTERBROOKS, LE ROY WALTON BLACK, HARLEY FRANK CAREY, STANLEY MILBURN DORE, MARSHALL NAIRNE FULTON, PAUL RUPERT GAST, ROBERT BRUCE LINDSAY, HAROLD SPENCE LITCHFIELD, CHAUNCEY DEPEW WENTWORTH, RAYMOND LOUIS WILDER.

THE ASSOCIATED ALUMNI

OFFICERS AND COMMITTEES FOR 1920-21

President: PAUL CHURCHILL DEWOLF, '05, Providence.

Vice-Presidents: FRED TARBELL FIELD, '00, Boston, Mass.; GEORGE ANTHONY GASKILL, '98, Worcester, Mass.; EDWARD H. WEEKS, '93, Providence.

Secretary: CLARKSON ABEL COLLINS, JR.

Treasurer: EDWARD TUDOR GROSS, '01, Providence.

Executive Committee: PAUL C. DE WOLF, '05, E. TUDOR GROSS, '01, CLARKSON A. COLLINS, JR., '08, WALTER W. WYCKOFF, '95, J. PALMER BARSTOW, '02, ARTHUR W. PINKHAM, '02, GEORGE B. BULLOCK, '05.

Advisory Board: EDWARD OTIS STANLEY, '76, GEORGE FREMONT BEAN, '81, IRA BARROWS, '83, ARCHIBALD CLAFLIN MATTESON, '93, ALFRED BERTRAM MEACHAM, '96, JOHN PALMER BARSTOW, '02, the Secretary, *ex officio*, one delegate from the Faculty, and representatives chosen by the Alumni Associations.

ALUMNI ASSOCIATIONS

BOSTON. *President,* Arthur W. Pinkham, '02. *Secretary,* Homer N. Sweet, '07, 50 Congress Street, Boston, Mass.

NEWPORT. *President,* Alan R. Wheeler, '01. *Secretary,* Alfred G. Langley, '76, 1 School Street, Newport, R. I.

WOONSOCKET. *President,* Henry Dursin, Jr., '16. *Secretary,* Frederic Earle Whitaker, '88, 9 Longley Building, Woonsocket, R. I.

FALL RIVER. *President,* Joseph L. W. MacKenzie, '04. *Secretary,* Carl A. Terry, '15, 29 Bedford Street, Fall River, Mass.

- WORCESTER COUNTY SONS OF BROWN. *President*, Gardner K. Hudson, '96. *Secretary*, George E. Marble, n. '00, 33 High Ridge Road, Worcester, Mass.
- CONNECTICUT VALLEY. *President*, William C. Giles, '11. *Secretary and Treasurer*, Herbert F. Osteyee, '13, 145 State Street, Springfield, Mass.
- OLD COLONY. *President*, Charles C. Eaton, '01, Brockton, Mass.
- NEW BEDFORD. *President*, Frank H. Gifford, '81. *Secretary*, Walter L. Chase, M.D., '92, 271 Union Street, New Bedford, Mass.
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- PHILADELPHIA. *President*, William E. Chalmers, '93. *Secretary*, Charles S. Shinn, '06, 514 Penfield Building, Philadelphia, Pa.
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- MARYLAND AND DISTRICT OF COLUMBIA. *President*, W. Clayton Carpenter, '06. *Secretary*, John R. Lapham, '09, 1829 G Street, N.W., Washington, D. C.
- WILMINGTON. *President*, Richard M. Atwater, '64. *Secretary*, Robert G. Caswell, '11, Box 525, Wilmington, Del.
- CLEVELAND. *Secretary*, Paul H. Keough, '17, University Club, Cleveland, Ohio.
- CINCINNATI. *President*, John D. Sage, '99. *Secretary*, Thomas M. Conroy, n. '19, 121 West 6th Street, Cincinnati, Ohio.
- CHICAGO. *President*, Sherman M. Strong, '15. *Secretary*, Earl M. Medbery, '14, 1212 Consumer's Building, Chicago, Ill.

MICHIGAN. *President*, Wilfred C. Leland, n. '92. *Secretary*, Theodore B. Farnsworth, '12, 614 Ford Building, Detroit, Mich.

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ROCKY MOUNTAIN. *President*, E. F. Dunlevy, '83. *Secretary*, Reginald Poland, '14, 1015 Logan Street, Denver, Colo.

SOUTHERN CALIFORNIA. *Secretary*, Lawrence L. Larrabee, '09, 243 Title Insurance Building, Los Angeles, Cal.

PUGET SOUND. *Secretary*, Moncrieffe Cameron, '00, 304 Central Building, Seattle, Wash.

ST. LOUIS. *President*, David S. H. Smith, '62. *Secretary*, Augustus L. Abbott, '80, 5449 Maple Street, St. Louis, Mo.

PUBLICATIONS†

The following list includes the official publications of the University with other pamphlets and periodical publications of interest to alumni and friends of the University. Unless otherwise stated, copies of any of these publications may be obtained by applying to the Registrar, Brown University.

BULLETIN OF BROWN UNIVERSITY

This series includes the Annual Catalogue of Brown University; Annual Report of the President to the Corporation; Program of Commencement Week; Announcement of Courses for the following year; Announcement of Courses for the Women's College.

THE ANNUAL REPORT OF THE TREASURER

THE HISTORICAL CATALOGUE OF BROWN UNIVERSITY, 1764-1914

This Catalogue gives the names of all persons who have been connected with Brown University, with brief biographical data, and the present addresses of living graduates.

789 pages, cloth, \$1.25, delivered. Copies of the Historical Catalogue, 1764-1904, may still be obtained. Price \$1.00, delivered. Address the Keeper of Graduate Records, Brown University, and make checks payable to Brown University.

THE HISTORY OF BROWN UNIVERSITY, 1764-1914

By Walter Cochrane Bronson, Litt.D., Professor of English Literature. Published in connection with the celebration of the one hundred and fiftieth anniversary of the founding of the University.

548 pages, cloth, \$2.00, delivered. Printed by D. B. Updike, at The Merrymount Press, Boston, Mass. Address the Library, Brown University, and make checks payable to Brown University.

THE SESQUI-CENTENNIAL OF BROWN UNIVERSITY, 1764-1914. A COMMEMORATION

Edited by William Vail Kellen, Ph.D., LL.D. A graphic account of the Celebration with all the addresses in full.

307 pages, cloth, \$2.50, delivered. Printed by D. B. Updike, at The Merrymount Press, Boston, Mass. Address the Library, Brown University, and make checks payable to Brown University.

† For special publications of the Women's College, see page 276.

THE CHARLES K. COLVER LECTURES

The American Conception of Liberty and the American Conception of Government. By Frank Johnson Goodnow, LL.D., President of Johns Hopkins University.

Price, fifty cents, delivered. Address the Library, Brown University, and make checks payable to Brown University.

Medical Research and Human Welfare. By William Williams Keen, M.D., LL.D.

Price \$1.25 net. Address Houghton Mifflin Co., Boston, Mass.

The Responsible State: a reëxamination of fundamental political doctrines in the light of world war, and the menace of anarchism. By Franklin Henry Giddings, LL.D.

Price \$1.00 net. Address Houghton Mifflin Co., Boston, Mass.

• Democracy: Discipline: Peace.

By William Roscoe Thayer, LL.D.

Price \$1.00 net. Address Houghton Mifflin Co., Boston, Mass.

Plymouth and the Pilgrims. By Arthur E. Lord.

Price \$1.50 net. Address Houghton Mifflin Co., Boston, Mass.

CONTRIBUTIONS FROM THE BIOLOGICAL DEPARTMENT OF BROWN UNIVERSITY

Volumes 1 to 8 mostly out of print. Volume 9 in progress.

Address Biological Department, Brown University.

STUDENT LIFE AT BROWN

Published by Alumni.

A pamphlet of 28 pages, with illustrations.

THE BROWN ALUMNI MONTHLY

Published by Alumni.

Subscription price \$1.00 a year. Address Brown Alumni Monthly, Brown University.

THE WOMEN'S COLLEGE

IN BROWN UNIVERSITY

ORGANIZATION OF THE WOMEN'S COLLEGE

INSTRUCTION for undergraduate women‡ is provided by a department of the University known as THE WOMEN'S COLLEGE IN BROWN UNIVERSITY. The aim of the Women's College is to offer to all properly prepared women the same examinations, the same courses of study under the same teachers, and the same degrees that the University offers to men, but to maintain separate classes and to preserve the distinct social life of a separate college.

The Corporation of the University has supervision and control of the Women's College as of other departments of the University, and for this purpose appoints annually an Executive Committee of the Women's College. The President of the University is charged with the general direction, supervision, and government of this College as of other departments of the University. The immediate direction, supervision, and government devolve, subject to the direction of the President, on the Dean of the Women's College. An Advisory Council, appointed under the authority of the Corporation, advises with the President and the Dean upon matters relating to the Women's College, and makes recommendations to the Executive Committee of the Women's College or to the Corporation. The immediate administration of the social life of the College, subject to the President of the University and the Dean of the College, rests with the Student Government Association.

The Faculty of the Women's College is composed of the heads of all departments of instruction in Brown University, together with all professors and instructors who are actually teaching in the College.

Catalogues of the Women's College may be obtained from the Registrar of the Women's College in Brown University, Providence, R. I. Requests for information not contained in this Catalogue or in the Bulletins should be addressed to the Dean of the Women's College in Brown University, Providence, R. I.

‡ In the Graduate Department of Brown University all courses intended for graduate students are open to women on the same terms as to men.

OFFICERS OF ADMINISTRATION AND INSTRUCTION

EXECUTIVE OFFICERS

WILLIAM HERBERT PERRY FAUNCE, D.D., LL.D., PRESIDENT

‡ LIDA SHAW KING, A.M., LITT. D., LL. D., DEAN OF THE WOMEN'S COLLEGE
Professor of Classical Literature and Archaeology

EMMA BRADFORD STANTON, A.M., REGISTRAR OF THE WOMEN'S COLLEGE

FACULTY

ALBERT GRANGER HARKNESS, A.M., LITT. D.

Professor of Roman Literature and History

HENRY BRAYTON GARDNER, PH. D.

Eastman Professor of Political Economy

COURTNEY LANGDON, A. B.

Professor of the Romance Languages and Literatures

EDMUND BURKE DELABARRE, PH. D.

Professor of Psychology

WALTER COCHRANE BRONSON, A.M., LITT. D.

Professor of English

WALTER GOODNOW EVERETT, PH. D.

Professor of Philosophy and Natural Theology

ASA CLINTON CROWELL, PH. D.

Associate Professor of the Germanic Languages and Literatures

CARL BARUS, PH. D., LL. D.

Dean of the Graduate Department; Hazard Professor of Physics

FRANCIS GREENLEAF ALLINSON, PH. D.

*David Benedict Professor of Greek Literature and History;
Director of the Museum of Fine Arts*

§ JAMES QUAYLE DEALEY, PH. D.

Professor of Social and Political Science

WALTER BALLOU JACOBS, A. M.

Professor of Education; Director of University Extension

ALBERT DAVIS MEAD, PH. D., Sc. D.

Professor of Biology

‡ On leave of absence during the academic year 1920-21.

§ On leave of absence during the second semester 1920-21.

ALBERT KNIGHT POTTER, A.M.

Professor of English

ALBERT BUSHNELL JOHNSON, A.M.

Associate Professor of the Romance Languages

FREDERIC POOLE GORHAM, A.M.

Professor of Bacteriology

JOHN FRANCIS GREENE, A.M.

Associate Professor of Roman Literature and History

HENRY THATCHER FOWLER, PH.D.

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GEORGE WYLLYS BENEDICT, PH.D.

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† THOMAS CROSBY, JR., A.M.

Associate Professor of English and Public Speaking

HENRY BARRETT HUNTINGTON, A.B.

Associate Professor of English

§ LIDA SHAW KING, A.M., LITT.D., LL.D.

Dean of the Women's College;

Professor of Classical Literature and Archaeology

CHARLES WILSON BROWN, A.M.

Associate Professor of Geology

HERBERT EUGENE WALTER, PH.D.

Associate Professor of Biology

ROLAND GEORGE DWIGHT RICHARDSON, PH.D.

Professor of Pure Mathematics;

Acting Director of the Ladd Observatory

CHARLES HERMAN HUNKINS, DR. UNIV. PARIS

Associate Professor of the Romance Languages and Literatures

RAYMOND CLARE ARCHIBALD, PH.D.

Associate Professor of Pure Mathematics

THEODORE COLLIER, PH.D.

Professor of European History

WILLIAM THOMSON HASTINGS, A.M.

Assistant Professor of English

JOHN CORLISS DUNNING, PH.D.

Assistant Professor of Political Science

† On leave of absence during the second semester 1920-21.

§ On leave of absence during the academic year 1920-21.

STEPHEN SHELDON COLVIN, PH.D.

Professor of Educational Psychology;

Director of the School of Education

ALFRED HARRISON JONES, PH.D.

Associate Professor of Logic

ROBERT MCBURNEY MITCHELL, PH.D.

Assistant Professor of the Germanic Languages and Literatures

KENDALL KERFOOT SMITH, PH.D.

Assistant Professor of Greek Literature and History

CLINTON HARVEY CURRIER, A.M.

Assistant Professor of Mathematics

HAROLD STEPHEN BUCKLIN, PH.D.

Assistant Professor of Social Science

HERBERT FRANKLIN DAVISON, A.M.

Assistant Professor of Chemistry

‡ JOHN SHAPLEY, PH.D.

Assistant Professor of Art

ROBERT WILBUR BURGESS, PH.D.

Assistant Professor of Mathematics

RAY EDWIN GILMAN, PH.D.

Assistant Professor of Mathematics

EDOUARD R. MASSEY, B. ÈS LETTRES

Assistant Professor of the Romance Languages

CARROLL WILLIAM DODGE, PH.D.

Assistant Professor of Botany

VERNER WINSLOW CRANE, PH.D.

Assistant Professor of American History

KENNETH OLIVER MASON, A.M.

Instructor in English

NELLIE EILEEN BUSSELL, A.B.

Director of Hygiene and Physical Education in the Women's College

ALBERT EDWARD RAND, PH.D.

Instructor in French

HELEN FRANCES ORDWAY, A.M.

Instructor in Biology in the Women's College

WILLIAM RODERICK SHERMAN, A.M.

Instructor in Economics

CLAUS EMANUEL EKSTROM, A.M.

Instructor in Education

‡ On leave of absence during the first semester 1920-21.

FRANCIS LLOYD SIMONS, Sc.M.

Instructor in Chemistry

BENJAMIN CROCKER CLOUGH, A.M.

Instructor in English

LECTURERS AND ASSISTANTS

CHARLOTTE HAYWOOD, A.B.

Assistant in Biology

MARJORIE BROWN

Assistant in Hygiene and Physical Education

FRANCES MORRILL MERRIAM, A.B.

Assistant in Mathematics

GENE WILDER WARE, A.B.

Lecturer in Music

BENJAMIN MALCOLM HARRIS, B.D., A.M.

Lecturer in Philosophy at the Women's College

BLANCHE NATHALIE DAVIS

Director of Chapel Music

ADMINISTRATIVE OFFICERS

MARY GILMAN AHLERS, A.B.

Director of Grounds and Buildings

EMILY SANGER PADDOCK

Head of Metcalf Hall

CHARLOTTE SNOW GODDING

Head of Miller Hall

COMMITTEE ON THE CURRICULUM

Professors EVERETT, RICHARDSON, and POTTER, President FAUNCE, and Dean KING, ex-officio.

EXECUTIVE COMMITTEE

President FAUNCE, Dean KING, Messrs. STEPHEN O. METCALF, WILLIAM GAMMELL, ALBERT L. SCOTT.

ADVISORY COUNCIL

Miss SARAH E. DOYLE, Miss AMELIA S. KNIGHT, Mrs. GUSTAV RADEKE, Mrs. CARL BARUS, Mrs. FRANCIS G. ALLINSON, Mrs. JOHN S. MURDOCK, Mrs. WALTER C. BRONSON.

ADMISSION TO THE WOMEN'S COLLEGE

REQUIREMENTS FOR ADMISSION

THE requirements for admission to the Women's College are the same as those which the University prescribes for men. For information concerning admission by certificate or examination, and the times and places of examinations, see pages 31-35. Certificates and applications for permission to take examinations should be sent to the Registrar of the University. For the entrance requirements for the various degrees, admission to advanced standing, and admission of special students, see pages 35-53. Each applicant for registration as a special student must consult the Dean of the Women's College before registering.

REGISTRATION AND ENROLMENT

The regulations governing registration and enrolment are the same at the Women's College as at the University. (See page 54.) All students must apply for registration and enrolment at the office of the Registrar of the Women's College, in Pembroke Hall, between 9 a.m. and 12 m., or between 2 p.m. and 4 p.m., on either of the two days preceding the opening of College. Permission to change a previous registration must be obtained from the Dean, on the same days and at the same hours.

REQUIREMENTS FOR DEGREES

The requirements for the various degrees are explained on pages 56-64. Upon students of the Women's College who complete satisfactorily the work leading to the degree of Bachelor of Arts, Bachelor of Philosophy, or Bachelor of Science,‡ the Board of Fellows of the University confers the appropriate degree.

FEEES

Students at the Women's College pay the tuition fee of \$175 in two instalments: \$87.50 upon registration in September and \$87.50 upon registration in February. No deduction in tuition is made on account of absence. Laboratory fees, etc., must be paid two weeks before the close of a semester. (See pages 168, 169.)

Special students at the Women's College are charged \$17.50 a semester for each course holding three recitations a week. Laboratory fees are in addition

‡ The Women's College does not at present offer courses leading to the degree of Bachelor of Science.

to this. Special students who are taking fewer than five academic courses will be charged \$17.50 for a gymnasium course of three hours.

SPECIAL FEES. Candidates for a first degree who do not pay four years full tuition fees must pay for all extra courses counted toward the degree at the rate of \$8.75 per semester for each three-hour course. This amount must be paid at the beginning of the semester preceding the completion of the degree work. This rule does not apply to courses credited from other institutions.

COURSES OF INSTRUCTION

C*COURSES* designated by a † are given at the University; a limited number of approved women students may be admitted to these courses upon application to the Dean of the Women's College. Women are also admitted to certain other University courses with the special permission of the departments concerned and with the consent of the Dean of the Women's College. In starred courses a final mark covering the work of the course as a whole is given at the end of the course, the mark given at the end of the first semester being regarded as temporary.

ART

[11], 12. *General History of Art.* Dr. SHAPLEY

Second semester. *Mon., Wed., Fri., at 12.25.*

[13. *Greek Sculpture*]

Not offered in 1920-21.

14. *Italian Renaissance Painting*

Second semester. *Mon., Wed., Fri., at 11.25.*

15,* 16.* *Freehand Drawing*

Given at the Rhode Island School of Design. Hours to be arranged with the Director.

17,* 18.* *Advanced Drawing*

Given at the Rhode Island School of Design. *Mon., Tu., Wed., at 2.* Lecture hour to be arranged with the Director.

[21], 22.† *Art Seminary*

[23, 24.† *Journal Club*]

Not offered in 1920-21.

ASTRONOMY

[1, 2. *Descriptive Astronomy*]

Not offered in 1920-21.

BIBLICAL LITERATURE AND HISTORY

1, 2. † *Elementary Hebrew*

[11, 12. † *Gospel and Epistles in Greek*]

Not offered in 1920-21.

13, 14. † *Acts and Pauline Epistles*

15, 16. *Old Testament Literature and History*. Professor FOWLER
Tu., Th., Sat., at 9.25.

[17, 18. *New Testament Literature and History*]

Not offered in 1920-21.

21, 22.* † *Biblical Seminary*

27. † *Origin and Growth of the Hebrew Religion*

28. † *Social Teachings of the Prophets and Jesus*

30. † *History of Religion (the same as Philosophy 30)*

BIOLOGY

1, 2. *General Biology*. Miss ORDWAY and Miss HAYWOOD
Tu., Th., Sat., at 11.25.

3, 4. *Comparative Anatomy of Vertebrates*. Professor WALTER
Tu., Th., Sat., at 11.25.

7, 8. *Embryology and Histology*. Professor MEAD
Th., Fri., 2 to 5.

12. † *General Physiology*

13, 14. † *Chemical Physiology*

15. † *Invertebrate Zoölogy*

16. *Bacteriology*. Professor GORHAM
Second semester. *Tu., Th., Sat., at 10.25.*

17, 18. † *Advanced Bacteriology*

27, 28. † *Advanced Bacteriology*

37, 38. † *Bacteriological Research*

BOTANY

1, 2. *General Course*. Professor DODGE

Tu., Th., Sat., at 12.25.

5, 6. † *Morphology*

18. † *Taxonomy*

10. † *Trees*

11, 12. † *Physiology*

13, 14. † *Plant Pathology*

7, 8. † *Botanical Research*

15, 16. † *Field Botany*

21, 22. † *Botanical Seminary*

CHEMISTRY

1, 2. *Descriptive Chemistry*. Professor DAVISON and Mr. SIMONS

Mon., Wed., Fri., at 12.25.

3, 4. † *Qualitative and Quantitative Analysis*

5, 6. † *Quantitative Analysis, Advanced Course*

7, 8. † *Organic Chemistry*

12. † *Organic Dyes*

17, 18. † *Physical Chemistry, Advanced Course*

19, 20. † *Organic Chemistry, Advanced Course*

21, 22. † *Organic Preparations, Advanced Course*

23, 24. † *Inorganic Preparations*

32. † *Industrial Analysis*

ECONOMICS †

1, 2. *Elementary Economics*. Mr. SHERMAN

Tu., Th., Sat., at 12.25.

3, 4. † *Industrial Management*

5, 6. † *Money and Banking*

7. † *Problems of Labor and Industry*

First semester.

8. † *Socialism and Allied Movements*

Second semester.

11, 12. † *Public Finance and Financial History*

13. † *Statistics*

First semester.

14. † *Foreign Trade and Transportation*

First semester.

15. † *Trade and Transportation in the United States*

16. † *Corporations and Corporation Finance*

17, 18. † *Accounting*

19, 20. † *Accounting*

24. † *Investments*

25, 26. † *Marketing*

† Candidates for the degree of Bachelor of Arts or Bachelor of Philosophy are required to take in the Sophomore or Junior year, at the Women's College, either Economics 1, 2 or Social Science 1 and Political Science 1. Advanced courses in Economics must be preceded by Economics 1, 2. This rule applies to the class of 1923 and to subsequent classes.

EDUCATION

2. *Principles of Education*. Professor JACOBS

First semester. *Mon., Wed., Fri., at 9.25.*

4. *Methods of Teaching*. Professor JACOBS

Second semester. *Mon., Wed., Fri., at 9.25.*

3. *Educational Psychology*. Mr. EKSTROM

First semester. *Mon., Wed., Fri., at 10.25.*

1. *History of Education*. Mr. EKSTROM

Second semester. *Mon., Wed., Fri., at 10.25.*

21. † *Administration of Education, National and State*

First semester.

22. † *Administration of Education : Local School Control*

Second semester.

5. † *Secondary Education, Organization and Function*

6. † *Secondary Education, Methods and Processes*

11, 12. † *Experimental Education*

15, 16. † *Seminary in Education*

ENGLISH

1. *Rhetoric and Composition*. Professor HASTINGS, MESSRS. MASON and CLOUGH

First semester. *Mon., Wed., Fri., at 9.25.*

48. *English Literature from the Beginning to 1700.* ‡ Professor HASTINGS

Second semester. *Mon., Wed., Fri., at 9.25.*

50. *Introduction to the Study of English Literature.* ‡ Professor BENEDICT

Second semester. *Mon., Wed., Fri., at 10.25.*

‡ Freshmen are required to take either 48 or 50. Those who have had a high school course in the history of English Literature, with reading in the principal authors, are advised to take 50; others are advised to take 48.

2. *Rhetoric and Composition*. Professor HASTINGS and Mr. MASON
Second semester. *Mon., Wed., Fri., at 9.25.*

49. *English Literature from 1700 to 1900*. Professor HUNTINGTON
First semester. *Mon., Wed., Fri., at 9.25.*

[5, 6. *Advanced Composition*]

Not offered in 1920-21.

7, 8. *Argumentative Composition*. Professor HUNTINGTON
Tu., Th., Sat., at 11.25.

11. *Public Speaking*. Professor CROSBY
First semester. *Mon., Wed., Fri., at 10.25.*

[23, 24. *The Modern English Drama*]

Not offered in 1920-21.

[25, 26. *Shakspeare*]

Not offered in 1920-21.

27, 28. *Shakspeare*. Professor POTTER
Tu., Th., Sat., at 12.25.

35. *English Literature from 1798 to 1832. Poetry*. Professor BEN-
EDICT

First semester. *Mon., Wed., Fri., at 9.25.*

36. *English Literature from 1798 to 1832. Prose*. Professor BENE-
DICT

Second semester. *Mon., Wed., Fri., at 9.25.*

[37. *English Literature from 1832 to 1892. Prose*]

Not offered in 1920-21.

[38. *English Literature from 1832 to 1892. Poetry*]

Not offered in 1920-21.

39, 40. *American Literature*. Professor BRONSON
Tu., Th., Sat., at 10.25.

19, 20. † *Middle English*

43, 44. † *Seminary in English*

GEOLOGY

[1. *Elementary Physical Geology*]

Not offered in 1920-21.

[6. *Principles of Economic Geography*]

Not offered in 1920-21.

2. † *Elementary Historical Geology*

4. † *Advanced Structural and Dynamical Geology*

9, 10. † *Mineralogy and Petrography*

11, 12. † *Research in Geology and Geography*

17, 18. † *Paleontology*

GERMANIC LANGUAGES AND LITERATURES

1, 2. *Elementary German, First Year.* MR. MILLER

Mon., Wed., Fri., at 12.25.

1 A, 2 A. † *Elementary German, First Year*

3, 4. † *Elementary German, Second Year*

5, 6. *Intermediate German.* PROFESSOR MITCHELL

Tu., Th., Sat., at 9.25.

5 A, 6 A. † *Oral Practice and Composition*

[7, 8. *Advanced German*]

Announced but not given in 1920-21.

[9, 10. *Modern Germany: Advanced Composition*]

Not offered in 1920-21.

[13, 14. *The German Short Story*]

Announced but not given in 1920-21.

[15, 16. † *German Drama of the Nineteenth Century*]

Not offered in 1920-21.

19, 20. † *Introduction to Scientific Prose*

23, 24. *Goethe*. PROFESSOR CROWELL

Mon., Wed., Fri., at 9.25.

[25, 26. † *German Literature to the End of the Classical Period*]

Not offered in 1920-21.

31. † *Gothic*

GREEK LITERATURE AND HISTORY

A, B. *Beginner's Course*. PROFESSOR SMITH

Mon., Wed., Fri., at 10.25.

1. *Homer and other Greek Poetry exclusive of the Drama*. PROFESSOR SMITH

First semester. *Tu., Th., Sat., at 9.25.*

2. *Plato and Lysias*. PROFESSOR ALLINSON

Second semester. *Tu., Th., Sat., at 9.25.*

[3. *Lucian and the Dramatic Poets*]

Announced but not given in 1920-21.

[4. *The Historians*]

Announced but not given in 1920-21.

7. *Aristophanes and Plato*. PROFESSOR ALLINSON

First semester. *Mon., Wed., Fri., at 9.25.*

8. *Aristotle*. PROFESSOR SMITH

Second semester. *Mon., Wed., Fri., at 9.25.*

[12. *Greek Composition*]

Not offered in 1920-21.

15. *Greek Civilization*. Professor ALLINSON

Second semester. *Tu., Th., Sat., at 12.25.*

17, 18. † *Greek Seminary*

HISTORY

1, 2. *History of Medieval and Modern Europe*. ‡ Professor COLLIER

Mon., Wed., Fri., at 11.25.

9. *Modern European History, 1815–1871*. Professor COLLIER

First semester. *Tu., Th., Sat., at 9.25.*

10. *Modern European History, 1871–1919*. Professor COLLIER

Second semester. *Tu., Th., Sat., at 9.25.*

13, 14. † *European History, Seminary*

21, 22. *The United States under the Constitution*. ‡ Professor CRANE

Mon., Wed., Fri., at 9.25.

25, 26. † *American History, Seminary*

[27, 28. *The History of the United States in its Contact with Foreign Powers*]

Not offered in 1920–21.

MATHEMATICS

61, 62. *Elementary Analysis, First Year*. Professors RICHARDSON and CURRIER, Dr. BORDEN

Tu., Th., Sat., at 10.25.

64. *Elementary Analysis, First Year*. Professor GILMAN

Second semester. *Tu., Th., Sat., at 10.25.*

‡ Candidates for the degree of Bachelor of Arts or Bachelor of Philosophy who have presented for admission Medieval and Modern European History, or English History, but not American History, must take 21, 22. Other students must take 1, 2.

1. *Solid Geometry*. Dr. BORDEN

Second semester. *Tu., Th., Sat., at 10.25.*

3. *Algebra*. Professor ARCHIBALD

First semester. *Tu., Th., Sat., at 10.25.*

65, 66. *Elementary Analysis, Second Year*. Professors RICHARDSON and ARCHIBALD

Tu., Th., Sat., at 9.25.

7, 8. *Analytic Geometry and Differential and Integral Calculus*. Professor BURGESS

Mon. at 8; Tu., Th., at 9.25.

27, 28. † *Projective Geometry*

29, 30. † *Introduction to Analysis*

41, 42. † *Fundamental Problems of Algebra*

53. † *Mathematical Theory of Investment*

54. † *Mathematical Theory of Statistics*

MUSIC

3. *The Symphony*. Mr. WARE

First semester. *Mon., Wed., Fri., at 11.25.*

4. *The Opera*. Mr. WARE

Second semester. *Mon., Wed., Fri., at 11.25.*

PHILOSOPHY

1, 2. *Introduction to Philosophy*. Professor JONES

Mon., Wed., Fri., at 11.25.

3, 34. *Psychology*. Professor DELABARRE

Tu., Th., Sat., at 8.

4. *Ethics*. Mr. HARRISSecond semester. *Mon., Wed., Fri., at 10.25.*5, 6. † *Psychology, Intermediate Course*9. *Philosophy of Religion*. Mr. HARRISFirst semester. *Mon., Wed., Fri., at 10.25.*10. † *Applications of Psychology*11, 12. † *Experimental Psychology, Introductory Laboratory Course*14, 15. † *Contemporary Philosophy*17, 18. † *Psychology, Advanced Course*19, 20. † *Experimental Psychology, Advanced Laboratory Course*21, 22. † *Advanced Ethics, Seminary Course*30. † *History of Religion*

PHYSICS

[1, 2. *Elementary Physics*]

Announced but not given in 1920-21.

3, 4. † *Physics, Intermediate Course*5, 6. † *Experimental Physics*11, 12. † *Advanced Laboratory Course*15, 16. † *Physics, Advanced Course*23, 24. † *Precision Measurements in Photometry, Electricity, and Magnetism*

ROMAN LITERATURE AND HISTORY

1. *Cicero's De Senectute, De Amicitia; Terence's Phormio.* Professor GREENE

First semester. *Mon., Th., Fri., at 2.*

2. *Selections from Horace.* Professor GREENE

Second semester. *Mon., Th., Fri., at 2.*

3. *Catullus and Virgil's Eclogues.* Professor HARKNESS

First semester. *Mon., Wed., Fri., at 10.25.*

4. *Plautus' Captivi, Trinummus, Rudens.* Professor GREENE

Second semester. *Mon., Wed., Fri., at 10.25.*

[5, 6. *Latin Poetry*]

Announced but not given in 1920-21.

[7, 8. *Latin Prose*]

Not offered in 1920-21.

[11, 12. *Latin Composition*]

Announced but not given in 1920-21.

16. *Roman Civilization.* Professor GREENE

First semester. *Tu., Th., Sat., at 12.25.*

ROMANCE LANGUAGES AND LITERATURES

1, 2. *Elementary French, First Year.* Professor MASSEY

Mon., Wed., Fri., at 12.25.

5, 6. *Intermediate French.* Mr. RAND

Mon., Wed., Fri., at 11.25.

7, 8. *Advanced French.* Professor MASSEY and Mr. RAND

1st division, Tu., Th., Sat., at 10.25; 2d division, Tu., Th., Sat., at 12.25.

9, 10. *The Realistic School.* Professor HUNKINS

Tu., Th., Sat., at 10.25.

[11, 12. *The Romantic School*]

Not offered in 1920-21.

23, 24. *Practice in Writing and Speaking French*. Professor MASSEY

Mon., Wed., Fri., at 10.25.

1, 2. *Elementary Italian, First Year*. Professor LANGDON
Tu., Th., Sat., at 9.25.1, 2. *Elementary Spanish, First Year*. Mr. THOMPSON
Mon., Wed., Fri., at 12.25.3, 4. *Elementary Spanish, Second Year*. Professor JOHNSON
Tu., Th., Sat., at 12.25.5, 6. † *Intermediate Spanish*. Professor JOHNSON
Mon., Wed., Fri., at 9.25.7, 8. † *Spanish Literature of the Golden Age*

SOCIAL AND POLITICAL SCIENCE†

SOCIAL SCIENCE

1. *Social Science*. Professor DEALEY

First semester. Followed in the second semester by Political Science 1. Tu., Th., Sat., at 12.25.

3, 2. *Modern Social Problems*. Professor BUCKLIN
Tu., Th., Sat., at 11.25.5. † *Social Institutions*7. † *Sociology and Education*8. † *Sociology and Education*9, 10. † *The Social Survey*

† Candidates for the degree of Bachelor of Arts or Bachelor of Philosophy are required to take in the Sophomore or Junior year, at the Women's College, either Economics 1, 2 or Social Science 1 and Political Science 1. The advanced courses in Social Science are elective for students who have credit for Social Science 1 or 2.

15. *Sociology*

First semester.

16. † *Social Psychology*

Second semester.

POLITICAL SCIENCE‡

1. *Political Science*. Professor DUNNINGSecond semester. Preceded by Social Science 1. *Tu., Th., Sat., at 12.25.*3. *Government and Politics of the United States*. Professor DUNNINGFirst semester. *Tu., Th., Sat., at 11.25.*

HYGIENE AND PHYSICAL EDUCATION§

NELLIE E. BUSSELL, A.B., *Director of Hygiene and Physical Education*MARJORIE BROWN, *Assistant in Hygiene and Physical Education*1. *Freshman Course*

In the fall and spring, sports. From Thanksgiving to the spring recess, practice in gymnastics, games and folk dances, and conferences in practical hygiene. Miss BROWN.

Three hours. Through the year. Required of all Freshmen. *1st division, Mon., Tu., Fri., at 3; 2d division, Mon., Tu., Fri., at 4.*

2. *Sophomore Course*

Similar to the Freshman course, but more advanced. Miss BUSSELL and Miss BROWN.

Three hours. Through the year. Required of all Sophomores. *1st division, Mon., Wed., Fri., at 12.20; 2d division, Mon., Th., Fri., at 2.*

3. *Junior and Senior Course*

Similar to the Sophomore course, but more advanced. Miss BUSSELL.

Three hours. Through the year. Required of all Juniors and Seniors. *Tu. at 12.20 or at 2, and two other hours at the convenience of the student. Juniors must choose course 5, 6 or 7 for one of these two hours.*

‡The advanced courses in Political Science are elective for students who have credit for 1 or 2.

§For further information about the Department of Hygiene and Physical Education, see page 265.

4. *Remedial Course*

Special exercises for students in need of corrective gymnastics. May be substituted for course 1, 2 or 3. Miss BUSSELL and Miss BROWN.

Three hours. Through the year. *Tu. at 2*, and two other hours at the convenience of the student.

5. *Play Course*

Plays, games, and folk-dances suitable for elementary schools, playgrounds, and social settlements. Miss BUSSELL.

One hour. From Thanksgiving to the spring recess. Elective for Seniors and Juniors.

6. *Dancing*

Esthetic and interpretative technique and dances. Miss BUSSELL.

One hour. Through the year. Elective for Seniors and Juniors. *Th. at 12.20 or at 3.*

7. *Advanced Gymnastics*

Advanced practice in gymnastics and sports. Miss BROWN.

One hour. Through the year. Elective for Seniors and Juniors. *1st division, Sat. at 9; 2d division, Sat. at 11.25.*

PREMIUMS, PRIZES, AND HONORS

THE GASPEE CHAPTER DAUGHTERS OF THE AMERICAN REVOLUTION PRIZE. This prize of forty dollars is awarded annually to that student in the Senior or Junior class of the Women's College who shall present the best essay of recognized merit upon some topic in American history. The essays are to bear each an assumed name, and to be accompanied by an envelope marked with the assumed name and enclosing the candidate's real name and address. The essays must be handed to the Dean before May 15. The award is announced at Commencement. The subject for 1920-21 is: *Rhode Island Folkways at the end of the Eighteenth Century.*

THE CHACE PRIZE. The will of Mrs. Elizabeth D. Chace makes provision for a prize of twenty-five dollars, to be awarded to that student of the Women's College who shall present the best essay, of recognized merit, upon the Women's Suffrage Movement. The essays must be handed to the Dean before May 15.

THE SOCIETY OF COLONIAL DAMES PRIZE IN AMERICAN HISTORY. The income of a fund of fifteen hundred dollars, known as the Roger Williams Fund established by the National Society of Colonial Dames in the State of Rhode Island and Providence Plantations, given to the University in 1906, is awarded annually as a prize for the best essay on a subject in American colonial history. The competition is open to Juniors, Seniors, and Graduates, and to men and women on equal terms. Essays must show independent use of authorities, and should, in general, extend to at least four thousand words. Competitors must give their names to the head of the Department of History by March 1; the essays must be handed to the Dean before May 12. The award is announced at Commencement. The subject for 1920-21 is: *The Commerce of Rhode Island with the Southern Continental Colonies in the Eighteenth Century.*

THE EDYTHE PECK ADAMS PRIZE. This prize is offered by the Class of 1901 for the best short story written by an undergraduate of the Women's College. The essays must be handed to the Dean before May 15.

THE SUSAN COLVER ROSENBERGER PRIZE of fifty dollars was established in 1919 by Jesse L. Rosenberger. For conditions of award, see page 191.

ADDITIONAL PREMIUMS. The students of the Women's College are entitled to compete in all examinations for premiums and prizes offered in Brown University. If any woman is entitled to a first premium in a competition primarily intended for men, a prize, the amount of which is duly announced, is awarded by the College. In 1920-21 the following premiums were awarded to women:

Collateral first premiums in Greek to ROSE FLORENCE BENJAMIN, instructed in the Classical High School, Providence, and to MAY BAGGOT KELLY, instructed in the Norwich Free Academy, Norwich, Connecticut.

A collateral first premium in Latin to ROSE FLORENCE BENJAMIN, instructed in the Classical High School, Providence.

A collateral first premium in French to CAROL BERNICE BOGMAN, instructed in the West Warwick High School.

FINAL HONORS are awarded by the University to women on the same conditions as to men. See pages 196, 197.

FINANCIAL AID TO STUDENTS

FELLOWSHIPS AND SCHOLARSHIPS

THE EMMA JOSEPHINE (AYER) ARNOLD ARCHAEOLOGICAL FELLOWSHIP, of ten thousand dollars, founded by Dr. Oliver H. Arnold in memory of his wife; the income is awarded, first, to a member of the graduating class, or, second, to a graduate of not more than ten years' standing, who is adequately prepared for post-graduate work in Archaeology, either Classical or Oriental, and who through scholarly attainments and by habits of zealous and diligent study gives great promise of a useful and successful career. The income is to be applied to the expenses of a one, two, or three year course in Archaeology either in the United States or in any foreign country. In case there is no applicant of sufficient merit among the graduates of the Women's College, the Fellowship is to be awarded for one year to a male graduate of the University who meets the above requirements. If there are no applicants for the use of this Fellowship in Archaeology, it is to be given for one year of post-graduate work in Higher Mathematics to a graduate of the Women's College who has exceptional ability and intends to follow the teaching of Mathematics as a profession. Applications for this Fellowship should be accompanied by academic records, testimonials as to character, ability, and health, specimens of written work, and a statement of the applicant's plan of work, and should be sent to the Dean of the Women's College before January 1.

THE ANNIE CROSBY EMERY ALUMNAE FELLOWSHIP was founded by the Alumnae Association of Brown University in 1914. The purpose of the Fellowship, maintained in honor of the second dean of the Women's College in Brown University, is to stimulate the intellectual life of the undergraduate students. It is awarded as an academic honor to a member of the graduating class on the basis of scholarly ability, excellence and breadth of general character, and good health. This Fellowship is to be used for a year of graduate study at any American university or college of acknowledged standing. It is not to be applied for, but is awarded each year, if there is a candidate of sufficient excellence. The formal announcement of the award is made by the Dean at Chapel exercises.

THE OLIVER CROMWELL GORTON ARNOLD BIOLOGICAL FELLOWSHIP is awarded annually for post-graduate work to a student, man or woman, in accordance with the requirements printed on pages 176, 177.

LA STAZIONE ZOOLOGICA. Alumnae of Brown University are eligible to La Stazione Zoologica at Naples. A woman's table is maintained by the Naples Table Association. Application should be made to Mrs. Samuel Clarke, Williamstown, Mass.

THE ALBERT HARKNESS FUND provides free tuition at the American School of Classical Studies at Athens for adequately prepared graduates of Brown University. See page 166.

THE SARAH E. DOYLE SCHOLARSHIP, of one thousand dollars, which bears the name of its founder; the income is applied toward the payment of the tuition of students in the Women's College who have been prepared for college in the Providence English High School.

THE SARAH SUTTON SCHOLARSHIP, of one thousand dollars, founded by one of her daughters.

THE DANIELS SCHOLARSHIP, of twenty-five hundred dollars; the income to be used toward paying the expenses of one or more women pursuing studies either in the University or in the Women's College.

THE HOWARD SCHOLARSHIP, of one thousand dollars, presented by James Leland Howard.

THE THAYER SCHOLARSHIP, founded by Edward C. Thayer, in honor of his father, Joseph Thayer, of the class of 1815; the income to be for the education of any young man or woman, a resident of Uxbridge, Mass., indorsed by the selectmen and superintendent of schools there, needing pecuniary aid, and giving promise by character and scholarship of a life of usefulness. If there is no applicant from Uxbridge, the income may go to any applicant from Massachusetts who fulfils the conditions.

THE MARIA STORRS PECK SCHOLARSHIP, of one thousand dollars, presented by her sisters.

THE ELI THAYER SCHOLARSHIP OF THE OREADS, of three thousand dollars, founded by the Oread Collegiate Institute Association, in memory of the Hon. Eli Thayer, the founder of the Institute; the income to be for the education of a deserving student in the Women's College, preferably a descendant of a former student of the Institute.

THE WILLIAM FULLER AYER SCHOLARSHIPS, two of two thousand dollars each, one of one thousand dollars, founded by Dr. Oliver H. Arnold in memory of William Fuller Ayer; the income is given "to poor and deserving students showing diligence and marked ability in their collegiate studies."

THE DAVID W. HOYT SCHOLARSHIP, of twenty-seven hundred dollars, founded by the Alumni Association of the Providence English High School; the income to go each year to some young man or woman designated by the Principal or the Acting Principal of the Providence High School, subject to the approval of the President or the Acting President of Brown University.

THE SUSAN E. KING SCHOLARSHIP, of one thousand dollars, the income to be given preferably to a member of the First Baptist Church in Providence.

THE CLARA ELIZABETH COMSTOCK SCHOLARSHIP, of one thousand dollars, presented by Louise Dearborn Gage; the income to be applied toward paying the tuition of undergraduate students in the Women's College in Brown University.

THE CHURCHILL FUND, with an annual income of one hundred and fifty dollars, founded by the Rhode Island Women's Club; the income to go each year to students in the Women's College, preferably to the daughter of a member of the Club.

Reduction in tuition fees is made by the College to some students, provided they are in need of such aid and maintain a high standard of scholarship. Application for reduction of tuition fees should be made in writing to the Dean of the Women's College on or before May 1.

THE LOAN FUNDS

A Loan Fund, established and maintained by the Rhode Island Society for the Collegiate Education of Women, is available for the use of Sophomores, Juniors, and Seniors, who may borrow moderate sums at a low rate of interest. Further information may be obtained from the Dean of the Women's College.

A Loan Fund, established and maintained by the Alumnae Association of Brown University, is available for the use of Freshmen who, in the judgment of the Alumnae trustees of the Fund, shall show promise of scholarly attainment.

THE SELF-SUPPORT COMMITTEE

The Self-Support Committee has for its purpose the care of students who need to earn money. It aims to secure employment for students, to regulate as far as possible the compensation and the conditions of outside work, and to make the amount of such work commensurate with the physical and mental strength of the student.

THE COLLEGE BUILDINGS

THE Women's College has a separate recitation hall, gymnasium, dormitories, and basket-ball and tennis grounds; but uses the various libraries, laboratories, and museums of the University. The grounds of the Women's College are an eighth of a mile from the University, with the main entrance at 172 Meeting Street. Pembroke Hall, the recitation building, contains the offices of the Dean and the Registrar, the chapel, recitation rooms, a reading room, a

reference library, a study, and a lunch room. Sayles Gymnasium contains the office of the Director of Hygiene and Physical Education, a large hall with a gallery, two rest rooms, a room for corrective work, and a social room; the basement is fitted with dressing rooms, lockers, bathrooms, needle and shower baths, and bowling alleys.

The College has two dormitories. Miller Hall, 118 Cushing Street, contains fifty-six single rooms for students, together with a library, and reception, dining, and sitting rooms. Metcalf Hall, 98 Cushing Street, contains sixty single rooms for students, together with a library, and reception and dining rooms. The charge for a corner room and board is \$460, for other rooms and board, \$450. Printed plans of the dormitories, together with other information, may be obtained from the Dean of the Women's College.

Students who cannot secure rooms on the campus are required to live in houses approved by the College.

PROVISION FOR WORSHIP, HEALTH, AND RECREATION

CHAPEL

CHAPEL services, with special speakers and with music furnished by the College choir, are held in Pembroke Hall four days a week. Attendance is required. One chapel service each month is in charge of the Christian Association.

HYGIENE

The Department of Hygiene and Physical Education aims to encourage habits of healthful living, with special emphasis upon proper posture, rational exercise, and rest. To this end all new students are required to attend lectures in Hygiene, conferences are held, and physical examinations are given before the assignment of exercise and at the end of the year by the Instructors in Hygiene and by Dr. Frank T. Fulton. Facilities are provided for exercise and rest, and there is a reference library of books on practical hygiene. Students who, because of their organic condition or temporary disability, are unable to take the regular class work, are given restricted or corrective exercise, or prescribed periods in the rest room, as a substitute. Outdoor sports are supervised by the Instructors in Hygiene. A resident nurse supervises the health of the students.

THE LIDA SHAW KING DECENNIAL FUND

This Fund was founded by the Rhode Island Society for the Collegiate Education of Women in honor of Miss King. The income is to be used "for the entertainment of guests, and the maintenance of the social and cultural side of college life."

STUDENT ORGANIZATIONS AND ENTERTAINMENTS

The Student Government Association is an organization of the entire student body for promoting the welfare of the College.

The Christian Association conducts monthly meetings, generally addressed by some speaker of experience, and provides classes for the study of the Bible and of missions. There are French and Mathematical Clubs, which carry on their work in connection with the academic departments concerned. The College Forum gives an opportunity to all students for open discussion of the important questions of the day, under the leading of competent men and women. The Question Club, a society composed of the presidents of all the large student organizations, is helpful in forming opinion on matters of student interest. There are two undergraduate publications, *The Sepiad*, a literary periodical, and *The Brün Mael*, an annual review of College life. Under the management of *The Sepiad* is published a monthly college newspaper, *The Sepiad Supplement*. Interest in the drama and music is fostered by a dramatic society; by a glee club; by the annual presentation of an original Sophomore masque; and by an annual song contest between the classes. The Athletic Association coöperates with the Department of Hygiene by arranging bowling, tennis, and basket-ball tournaments. Class organizations, an all-college society, and an advisory system, whereby the senior class is given responsibility for the welfare of the Freshmen, promote sociability and the spirit of helpfulness.

Lectures, concerts, and other entertainments are provided from time to time by the College.

FORM OF BEQUEST

All gifts, legacies, and bequests for the Women's College should be made payable to "Brown University, in Providence, in the State of Rhode Island and Providence Plantations," and designated for the use of the Women's College.

STUDENTS IN THE WOMEN'S COLLEGE

SENIORS : CLASS OF 1921

NAME		RESIDENCE
Sadie Denie Abrich	P	<i>Providence</i>
Dorothy Charlotte Baker	P	<i>Providence</i>
Pauline Alverson Barrows	A	<i>Providence</i>
Avice Estella Bliss	A	<i>Providence</i>
Olive Flora Briggs	A	<i>East Greenwich</i>
Dorothy Emmons Bryant	A	<i>Saylesville</i>
Fannie Irwin Campbell	A	<i>Phenix</i>
Lillian Hedwig Nathalie Carlen	P	<i>Providence</i>
Dorothy Chace	P	<i>South Dartmouth, Mass.</i>
Helen Cooper	A	<i>Attleboro, Mass.</i>
Lena Lucile Crapo	P	<i>Taunton, Mass.</i>
Sarah Crovitz	P	<i>Cranston</i>
Mary Wilbur Cushman	P	<i>Fairhaven, Mass.</i>
Agnes Anne Davitt	P	<i>Providence</i>
Florence Gertrude Eddy	P	<i>Providence</i>
Gertrude Eisenberg	P	<i>Pawtucket</i>
Lorraine Hunter Ferguson	P	<i>Providence</i>
Ida Frant	A	<i>Newport</i>
Beatrice Louise Guildford	P	<i>Providence</i>
Constance Williams Haley	A	<i>Stonington, Ct.</i>
Mary Isabelle Halloran	A	<i>Berkeley</i>
Sarah Ann Hill	A	<i>Riverside</i>
Josephine Alice Hope	A	<i>Edgewood</i>
Gladys Mae Jordan	P	<i>Swansea, Mass.</i>
Elizabeth Linden Kiley	A	<i>Pawtucket</i>
Anna Blanche La Fond	P	<i>Woonsocket</i>
Elsie Ellen Lord	P	<i>Providence</i>
Mary Blake Lovell	P	<i>Boston, Mass.</i>
Dorothy Loynes	A	<i>Springfield, Mass.</i>
Grace Mildred McCall	A	<i>Reading, Pa.</i>
Madonna Violet McDermott	A	<i>Providence</i>
Alice Margaret Mackenzie	P	<i>Arnold's Mills</i>
Dorothy Elaine Maxwell	A	<i>Slatington, Pa.</i>
Frances Mattiline Money	P	<i>West Greenwich</i>
Elisabeth Nightingale	P	<i>Moosup, Ct.</i>
Mary Greeley Alberta O'Neil	A	<i>Providence</i>
Margaret Comstock Packer	A	<i>Waterbury, Ct.</i>
Flora Belle Peirce	P	<i>New Bedford, Mass.</i>

NAME		RESIDENCE
Florence Elizabeth Pettibone	P	<i>New Milford, Ct.</i>
Lettie Harriet Robidou	A	<i>Ellis, Mass.</i>
Bernice Alethea Rodemann	P	<i>Newark, N. J.</i>
Margaret Drowne Ross	P	<i>Providence</i>
Mollie Nyma Rubenstein	P	<i>Providence</i>
Leonilda Sansone	A	<i>Bristol</i>
Palmyra Rose Serpa	P	<i>Providence</i>
Susan Theresa Shea	A	<i>Brockton, Mass.</i>
Fannie Beatrice Smith	A	<i>Providence</i>
Olive Anne Taplin	A	<i>Springfield, Mass.</i>
Virginia Lee Tourtellot	P	<i>Providence</i>
Adeline Bell Wetmore	A	<i>Watertown, Ct.</i>
Lois Wilbur	P	<i>New Bedford, Mass.</i>
Ida Wilsker	A	<i>Newport</i>

JUNIORS: CLASS OF 1922

Dorothy May Abbott	A	<i>Providence</i>
Isabel Ross Abbott	A	<i>Providence</i>
Doris Elizabeth Allen	A	<i>Providence</i>
Elizabeth Harriet Baker	A	<i>Farmington, Me.</i>
Florence Allin Black	A	<i>Warren</i>
Helen Lincoln Borden	P	<i>Providence</i>
Kathleen Victoria Boyd	A	<i>Providence</i>
Laurine Wheaton Bradford	A	<i>Bristol</i>
Helen Sara Brintzenhoff	P	<i>Reading, Pa.</i>
Hope Elizabeth Burgess	A	<i>Rockland, Mass.</i>
Annie Strange Coggeshall	A	<i>Bristol</i>
Katherine Elizabeth Colton	A	<i>Providence</i>
Marion Elizabeth Craig	A	<i>Springfield, Mass.</i>
Irene Isabel Crockett	P	<i>South Manchester, Ct.</i>
Madeline Glase Dickinson	P	<i>Reading, Pa.</i>
Rose Mary Finkelstein	A	<i>Waterbury, Ct.</i>
Ophelia Celeste Fiore	A	<i>Montclair, N. J.</i>
Edith Allegra Fletcher	A	<i>Springfield, Mass.</i>
Helen Frances Gallivan	A	<i>Providence</i>
Malvina Mary Grieves	P	<i>Providence</i>
Phoebe Gates Hall	P	<i>Westerly</i>
Helen Catherine Harper	P	<i>Brockton, Mass.</i>
Celia Kaufman	A	<i>Pawtucket</i>
Eunice Truman Keough	A	<i>Pawtucket</i>
Beatrice Rebecca Kershaw	A	<i>North Adams, Mass.</i>
Dorothy Leavens	A	<i>Pawtucket</i>

THE WOMEN'S COLLEGE

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NAME		RESIDENCE
Leota Nichols Lyon	A	<i>Bridgeport, Ct.</i>
Mary Catherine McCarthy	A	<i>Providence</i>
Miriam Josephine McCaughey	A	<i>Bristol</i>
Carolyn Ethel Macdonald	P	<i>East Providence</i>
Edith Louise McEwen	A	<i>Providence</i>
Dorothy Metcalf McVay	P	<i>Carolina</i>
Mildred Earle Mowry	A	<i>Centredale</i>
Irene Nightingale	P	<i>Moosup, Ct.</i>
Gertrude May Niven	P	<i>Providence</i>
Helen Louise Osborne	A	<i>Bridgeton</i>
Margaret Elizabeth Perry	A	<i>Greene</i>
Dorothy Caroline Rickenbacker	A	<i>Newark, N. J.</i>
Lucile Rogers	A	<i>Providence</i>
Marian Ellen Sampson	A	<i>Providence</i>
Helen Frances Sheehan	A	<i>Providence</i>
Eunice Rose Simpson	A	<i>Worcester, Mass.</i>
Isabelle Swain Smith	A	<i>Providence</i>
Esther Cordelia Spear	A	<i>Springfield, Mass.</i>
Amey Steere	P	<i>Chepachet</i>
Helen Julia Thayer	A	<i>Woonsocket</i>
Nancy Alice True	A	<i>Providence</i>
Helen Lowe Urquhart	A	<i>Providence</i>
Esther Marian Ward	A	<i>Plymouth, Mass.</i>
Claudia Wilson	P	<i>Conshohocken, Pa.</i>

SOPHOMORES: CLASS OF 1923

Grace Mildred Andrews	A	<i>Brockton, Mass.</i>
Mary Calder Appel	A	<i>Lancaster, Pa.</i>
Susan Burton Appel	P	<i>Lancaster, Pa.</i>
Helen Brown Avery	P	<i>Providence</i>
Mildred Russell Bailey	A	<i>Providence</i>
Gladys Louise Baker	P	<i>Sterling, Ct.</i>
Margaret Dover Barton	A	<i>Fall River, Mass.</i>
Norma Florence Barton	A	<i>New Milford, Ct.</i>
Ruth Bateman	P	<i>Somerville, N. J.</i>
Gladys Margaret Bauer	P	<i>Attleboro, Mass.</i>
Eleanor Beers	A	<i>Providence</i>
Agnes Clementyne Boylan	A	<i>Providence</i>
Irene Elizabeth Boylan	A	<i>Providence</i>
Lottie Brindle	A	<i>Woonsocket</i>
Mary Sulley Brown	A	<i>Springfield, Mass.</i>
Ruth May Bugbee	P	<i>Edgewood</i>

NAME		RESIDENCE
Ruth Upton Burt	P	<i>Auburn</i>
Amy Amanda Campbell	P	<i>Crompton</i>
Elsie Marie Carlen	A	<i>Providence</i>
Dorothy Margaret Carr	A	<i>South Manchester, Ct.</i>
Margaret Elizabeth Cheetham	A	<i>Providence</i>
Janet Chew	P	<i>Fall River, Mass.</i>
Anna Gardner Coggeshall	A	<i>Bristol</i>
Agnes Cole	A	<i>Three Rivers, Mass.</i>
Sarah Cooperstein	P	<i>Taunton, Mass.</i>
Gladys Marie Craig	A	<i>Taunton, Mass.</i>
Margaret Mary Cummings	P	<i>Providence</i>
Alice Estelle Desmond	A	<i>Providence</i>
Miriam Schick Dick	P	<i>Reading, Pa.</i>
Elizabeth Ewart	P	<i>Pawtucket</i>
Marion Liliias Fairweather	P	<i>Providence</i>
Catherine Theresa Fanning	A	<i>Providence</i>
Josephine Mary Flumere	P	<i>Framingham, Mass.</i>
Ruth Gup	P	<i>Providence</i>
Esther Louise Hagstrom	A	<i>Pawtucket</i>
Ruth Hanchett	A	<i>Providence</i>
Marian Glaze Hassinger	A	<i>Reading, Pa.</i>
June Heller	A	<i>Lancaster, Pa.</i>
Helen Anderson Hoff	P	<i>Neshanic Station, N. J.</i>
Mary Catherine Hogan	A	<i>Pawtucket</i>
Mary Elizabeth Holland	A	<i>Fall River, Mass.</i>
Dorothy Beryl Hotchkiss	A	<i>Pawtucket</i>
Sarah Jacobson	A	<i>New Bedford, Mass.</i>
Ruth Elizabeth King	A	<i>Lawrence, Mass.</i>
Dessie Kushelevitch	A	<i>Woonsocket</i>
Evelyn Lochman	P	<i>Salem, Mass.</i>
Irene Magdalen Long	A	<i>Woonsocket</i>
Ruth Almira Lothrop	A	<i>Auburn</i>
Alice Katherine Lynch	A	<i>Fall River, Mass.</i>
Mary Lillian McCormick	A	<i>Newport</i>
Helen Cunyes MacNaught	A	<i>Woods Hole, Mass.</i>
Florence Josephine Maguire	P	<i>East Boston, Mass.</i>
Ruth Wilmarth Marvel	A	<i>Rehoboth, Mass.</i>
Helen Agnes Mauran	A	<i>Newport</i>
Florence Goff Moulton	P	<i>Pawtucket</i>
Dorothy Thayer Mowry	A	<i>Woonsocket</i>
Gladys May Mowry	A	<i>Oneco, Ct.</i>
Miriam Nagle	A	<i>Providence</i>
Eileen Isabelle Ostigny	A	<i>Springfield, Mass.</i>

THE WOMEN'S COLLEGE

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NAME		RESIDENCE
Eleanore Woodward Parmelee	P	<i>Providence</i>
Ruth Elizabeth Parsons	A	<i>Woonsocket</i>
Dorothy Frink Patton	A	<i>Milton, Mass.</i>
Eva Rabinovitz	A	<i>Woonsocket</i>
Edythe Florence Reeves	A	<i>Auburn</i>
Beatrice May Richards	P	<i>Auburn</i>
Emilia Eleanore Robison	P	<i>Schenectady, N.Y.</i>
Bella Rubinstein	A	<i>Providence</i>
Ida Rubinstein	P	<i>Providence</i>
Mary Elmira Schroeder	A	<i>Reading, Pa.</i>
Joanna Monica Shea	P	<i>Brockton, Mass.</i>
Evelyn Ray Sheehan	A	<i>Revere, Mass.</i>
Grace Dauer Shein	A	<i>Providence</i>
Dora Sherman	P	<i>Providence</i>
Dorothy Simpson	A	<i>Howard</i>
Bernice Grace Smith	A	<i>Providence</i>
Carolyn Rebecca Smith	P	<i>Reading, Pa.</i>
Dorothea Alice Smith	A	<i>Providence</i>
Elizabeth Thatcher Stafford	P	<i>Providence</i>
Nellie Clayton Stokes	A	<i>Providence</i>
Elsie Pauline Swanson	P	<i>Crompton</i>
Belmira Evelina Tavares	A	<i>Fall River, Mass.</i>
Muriel Theresa Tierney	A	<i>Providence</i>
Doris Ethel Watts	A	<i>Springfield, Mass.</i>
Sarah Eleanor Wells	A	<i>Providence</i>
Olive Greene Wildes	P	<i>Auburn</i>
Catherine Veronica Winsper	P	<i>New Bedford, Mass.</i>
Maude Ella Wishart	P	<i>Fall River, Mass.</i>
Alice Montgomery Wright	P	<i>Edgewood</i>
Frances May Wright	A	<i>Palmer, Mass.</i>

FRESHMEN : CLASS OF 1924

Moldred Leigh Anderson	A	<i>Edgewood</i>
Dorothy Andrews	P	<i>Holbrook, Mass.</i>
Doris Anthony	A	<i>East Providence</i>
Elizabeth Apollonio	A	<i>Milton, Mass.</i>
Rose Florence Benjamin	A	<i>Providence</i>
Carol Bernice Bogman	P	<i>Apponaug</i>
Marion Josephine Bower	A	<i>Methuen, Mass.</i>
Dorothea Lucy Brooks	A	<i>Pittsburgh, Pa.</i>
Ruth Miriam Brown	P	<i>Harmony</i>
Dorothy Angell Bundy	A	<i>North Woodstock, Ct.</i>

NAME		RESIDENCE
Eloise Frye Burt	A	<i>Auburn</i>
Lois Campbell	P	<i>Providence</i>
Marjorie Dent Candee	A	<i>Norwalk, Ct.</i>
Irene Dorothy Carlin	P	<i>Pawtucket</i>
Elizabeth Temple Casey	P	<i>Edgewood</i>
Hazel Miriam Chapman	A	<i>Central Village, Ct.</i>
Ruth Marion Clifford	P	<i>Brockton, Mass.</i>
Alice Mabel Collins	A	<i>Rumford</i>
Catherine Mae Collins	P	<i>Montville, Ct.</i>
Goldie Corash	A	<i>Worcester, Mass.</i>
Margaret Atherton Cutler	P	<i>Bridgewater, Mass.</i>
Mary Louise Darmedy	A	<i>Mansfield, Mass.</i>
Glenna Wedman Day	A	<i>Brockton, Mass.</i>
Kathryn Marion Denneny	A	<i>Pawtucket</i>
Helen Wooddell Fenner	A	<i>Auburn</i>
Charlotte Ferguson	A	<i>Marblehead, Mass.</i>
Hope Sewell French	A	<i>Lake Forest, Ill.</i>
Esther Linnea Fritz	A	<i>Providence</i>
Thelma Alverna Garland	A	<i>Boston, Mass.</i>
Katharine Agnes Gilbert	A	<i>Montpelier, Vt.</i>
Dorothy Henderson Gray	A	<i>Providence</i>
Gretchen Elizabeth Gugel	P	<i>Long Branch, N. J.</i>
Amelia May Harris	A	<i>Providence</i>
Myrtle Page Hodgkins	A	<i>Providence</i>
Marion Sieverts Holland	P	<i>Saunderstown</i>
Grace Arline Hopkins	A	<i>Taunton, Mass.</i>
Annabel Howarth	A	<i>North Providence</i>
Ruth Hutchinson	P	<i>Dorchester, Mass.</i>
Anna Marie Iannaccio	P	<i>Elizabeth, N. J.</i>
Hope Jillson	P	<i>Providence</i>
Ruth Dorothea Johnson	P	<i>Providence</i>
Mary Elinor Jones	P	<i>Norway, Me.</i>
Laura Udell Keilty	A	<i>Providence</i>
May Baggott Kelly	A	<i>Norwich, Ct.</i>
Orina Winifred Kidd	P	<i>Fall River, Mass.</i>
Mary Landon	P	<i>Hartford, Ct.</i>
Esther Haynes Lane	A	<i>Evanston, Ill.</i>
Cecilia Marion Lennon	A	<i>Pawtucket</i>
Ethel Esther Lippman	A	<i>Providence</i>
Jane Collins Luce	A	<i>Cambridge, Mass.</i>
Dorothy Beatrice McCormick	P	<i>Providence</i>
Verna Ruth McElroy	A	<i>Woodbridge, N. J.</i>
Cécile Louise McInnis	P	<i>Brockton, Mass.</i>

NAME

RESIDENCE

Doris Porter McLeod	A	<i>Hatfield, Mass.</i>
Elizabeth Doerr Maginnity	A	<i>Providence</i>
Dorothy Carroll Maguire	A	<i>Providence</i>
Rose Marks	A	<i>Warren, R. I.</i>
Helen May Mathus	P	<i>Edgewood</i>
Florence May	A	<i>Providence</i>
Caroline Helen Mucha	A	<i>Elizabeth, N. J.</i>
Lois Elizabeth Munroe	P	<i>Riverside</i>
Mildred Maclaren Murray	A	<i>Fall River, Mass.</i>
Dorothy Osborne	A	<i>Edgewood</i>
Rachel Frances Pearson	A	<i>Ware, Mass.</i>
Beatrice Olson Perry	P	<i>Tiverton</i>
Velma Pilling	A	<i>Providence</i>
Miriam Avis Price	A	<i>Providence</i>
Marjorie Lillia Rich	P	<i>Providence</i>
Elizabeth Shuman	A	<i>Evanston, Ill.</i>
Rose Nora Agnes Sisca	A	<i>Fall River, Mass.</i>
Ruth Adams Small	A	<i>Pawtucket</i>
Marion Louise Smith	A	<i>Phenix</i>
Marjorie Tucker	A	<i>Milton, Mass.</i>
Ruth Louise Vinton	A	<i>Roselle, N. J.</i>
Hazel May Walker	P	<i>Pawtucket</i>
Grace Wamsley	A	<i>Charleston, S. C.</i>
Frances Deaver Waring	A	<i>Baltimore, Md.</i>
Charlotte Cecilia West	A	<i>Washington, D. C.</i>
Elizabeth Lee Young	A	<i>Providence</i>

CANDIDATES FOR THE B. E. DEGREE

Elizabeth Irene Ballard	<i>Providence</i>
Anna Louise Burns	<i>Providence</i>
Mary Cornelia Greene	<i>Providence</i>
Monica Mary Hoye	<i>Providence</i>
Helen Agnes Luddy	<i>Pawtucket</i>
Marion Ethel Macdonald	<i>Providence</i>
Cecilia Agnes Savage	<i>Valley Falls</i>
Emily Ann Steere	<i>Providence</i>
Esther Waterman Tripp	<i>Arlington</i>

SPECIAL STUDENTS

NAME	RESIDENCE
Mabelle Allen	<i>Woonsocket</i>
Sybil Hope Bemis	<i>Providence</i>
Jennie Goodenow Brown	<i>Pawtucket</i>
Mildred Eleanor Carlen	<i>Providence</i>
Antonina Madeline DiNapoli	<i>Waterbury, Ct.</i>
Fay Struble Fancher	<i>Providence</i>
Alice Collins Gleason	<i>Providence</i>
Florence Eliza Griswold	<i>Providence</i>
Mary McCauley	<i>Providence</i>
Mary McGair	<i>Providence</i>
Mary Olive McMichael	<i>Blackstone, Mass.</i>
Susanna Matteson	<i>Providence</i>
Adelaide Patterson	<i>Providence</i>
Ruth Howard Preston	<i>Providence</i>
Ruth Mabel Ranger	<i>Providence</i>
Edith Lillian Robirson	<i>Providence</i>
Emma Russell	<i>Rangeley, Me.</i>
Frances Semle	<i>Providence</i>
Leigh Roberts Stanton	<i>Waco, Texas</i>
Edith Tracy	<i>Barrington</i>
Elizabeth Houghton Wheeler	<i>Cape Elizabeth, Me.</i>
Laura Yeomans Zallée	<i>Providence</i>

APPENDIX

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THE RHODE ISLAND ALPHA OF THE PHI BETA KAPPA SOCIETY ‡ WOMEN'S ORGANIZATION

President: Mrs. WALTER C. BRONSON.

Vice-President: _____

Secretary-Treasurer: Mrs. HENRY B. HATHAWAY.

Committee on Arrangements: Miss ANNE W. CARPENTER, *Chairman*, Mrs. WILLIAM H. EDDY, Miss MARGARET B. STILLWELL.

WOMEN ELECTED IN 1920

Seniors: RUTH PEARSON CHANDLER, DOROTHY STEPHANS HOLT, CECELIA MADELINE MORIN, KATHERINE TORREY.

Juniors: MARY GREELEY, ALBERTA O'NEIL, LETTIE HARRIET ROBIDOU.

THE BROWN CHAPTER OF THE SOCIETY OF THE SIGMA XI §

THE ALUMNAE ASSOCIATION OF BROWN UNIVERSITY

OFFICERS FOR 1920-21

President: Mrs. HORACE G. BISSELL, '95, Providence.

Vice-President: Miss LAURA RICHARDS SHERMAN, '06, Providence.

Recording Secretary: Mrs. WILLIAM H. EDDY, '97, Providence.

Corresponding Secretary: Miss ALICE F. HILDRETH, '11, 24 Medway Street, Providence.

Treasurer: Miss FLORA M. COTTON, '04, 16 Humboldt Avenue, Providence.

ALUMNAE CLUBS

NEW YORK. *President*, Miss Miriam Slocum, ex-'04. *Vice-President*, Miss Ida F. Herrmann, '06. *Corresponding Secretary*, Miss Ollie A. Randall, '12. *Recording Secretary-Treasurer*, Miss Evelyn B. Tilden, '13, 95 Brant Place, New York City. *Representative to Executive Board*, Miss Margaret Roys, '03.

‡ See pages 232, 233.

§ See page 233.

BOSTON. *President*, Mrs. Nathan R. Wood, '95. *Vice-President*, Mrs. Clarence M. Whipple, '10. *Recording Secretary and Treasurer*, Miss Marjorie W. Shaw, '04. *Corresponding Secretary*, Miss Charlotte Huntoon, *sp.* '12, 161 South Huntington Avenue, Boston.

CONNECTICUT VALLEY. *President*, Mrs. Andrew S. Thomson, '99. *Vice-President*, Mrs. C. Wilbur Cary, '96. *Secretary-Treasurer*, Miss Asenath Tarr, *sp.* '10, 188 Sumner Avenue, Springfield, Mass.

ALBANY. *President*, Mrs. Frank D. Easterbrooks, '96. *Secretary*, Miss Lucy E. Bourn, '15, Albany Hospital, Albany, N. Y.

WASHINGTON. *President*, Miss Margaret B. Church, '12. *Vice-President*, Mrs. James V. Bennett, '18. *Secretary-Treasurer*, Miss Marian Chace, ex-'20. *Corresponding Secretary*, Miss Winifred C. Wetherbee, '17. 1236 B Street, N.E., Washington, D.C. *Representative to Executive Board*, Miss Minnie E. Taylor, '13.

PUBLICATIONS

THE WOMEN'S COLLEGE BOOKLET

Published by the College.

A pamphlet with illustrations. Address the Registrar, Pembroke Hall, Providence.

THE ALUMNAE RECORD

Published semi-annually by the Alumnae.

Address the Registrar, Pembroke Hall, Providence.

SUMMARY OF REGISTRATION

GRADUATE STUDENTS

Men	73
Women	32
	<hr/> 105

UNDERGRADUATE MEN

Seniors	173
Juniors	179
Sophomores	266
Freshmen	268
Special Students	80
Total	<hr/> 966

THE WOMEN'S COLLEGE

Seniors	52
Juniors	50
Sophomores	89
Freshmen	79
Special Students	22
Candidates for the B. E. degree	9
Total	<hr/> 301

GENERAL SUMMARY

Graduates	105
Undergraduate Men	966
Women's College	301
	<hr/> 1372
Deduct for names counted twice	5
Total	<hr/> 1367
Registered in Extension Courses, first semester, 1920-21, and not included above	881
Total number of persons receiving instruction from the University	<hr/> 2248

OFFICE HOURS

PRESIDENT. 10 Administration Building (*for students*, 11 Administration Building): 12 m. to 1 p.m.

DEAN OF THE UNIVERSITY. 7 Administration Building: 11.30 to 12.30 a.m.; 3 to 4 p.m., *except Saturdays*.

REGISTRAR, AND SECRETARY OF THE FACULTY. 1 Administration Building: 11 a.m. to 12 m. REGISTRAR'S OFFICE, 4 Administration Building: 9 a.m. to 4 p.m.; *Saturdays*, 9 a.m. to 1 p.m.

COMPTROLLER. 3 University Hall: 9 to 10 a.m. *daily*; 2 to 2.30 p.m., *except Saturdays*. COMPTROLLER'S OFFICE: 9 a.m. to 4 p.m.; *Saturdays*, 9 a.m. to 1 p.m.

DEAN OF THE GRADUATE DEPARTMENT. 5 Wilson Hall: 12.20 to 1.20 p.m.; 3.20 to 4.20 p.m.

LIBRARIAN OF THE UNIVERSITY. The John Hay Library: 9 to 10 a.m.; 3 to 4 p.m.; *Saturdays*, 9 to 10 a.m.

DIRECTOR OF UNIVERSITY EXTENSION. 81 Waterman Street: *Mon.*, *Wed.*, 10.30 to 11.25 a.m.; 2.30 to 3.30 p.m.; *Fri.*, 10.30 to 11.25 a.m.; *Sat.*, 12.20 to 1 p.m.

SUPERINTENDENT OF GROUNDS AND BUILDINGS. 1 University Hall: 9 to 10 a.m. *daily*; 2 to 2.30 p.m., *except Saturdays*. SUPERINTENDENT'S OFFICE: 8.30 a.m. to 6 p.m.

DEAN OF THE WOMEN'S COLLEGE. Pembroke Hall: 9.30 a.m. to 12.30 p.m., *except Saturdays*.

REGISTRAR OF THE WOMEN'S COLLEGE. Pembroke Hall: 9.15 a.m. to 1.30 p.m.; 3 to 5 p.m.; *Saturdays*, 9.15 a.m. to 1 p.m.

UNIVERSITY PHYSICIAN. R. G. BUGBEE, M.D. 223 Thayer Street: 2 to 4 p.m.; 7 to 8 p.m.; *Sundays by appointment*. Telephone *Angell* 2660-W.

ABSENCE COMMITTEE. H. B. HUNTINGTON, Secretary. 5 Administration Building: 1.45 to 3 p.m., *except Wednesdays and Saturdays*.

SUPERVISOR OF ATHLETIC ORGANIZATIONS. F. W. MARVEL. The Gymnasium: 9 to 11 a.m.; 2 to 3 p.m.

SUPERVISOR OF NON-ATHLETIC ORGANIZATIONS. S. T. ARNOLD. Rogers Hall: 9.30 to 10 a.m., *except Saturdays*.

PUBLICITY COMMITTEE. 11 Administration Building: 11 a.m. to 12 m.

KEEPER OF GRADUATE RECORDS. Rockefeller Hall.

EXECUTIVE SECRETARY. T. B. APPEGET. 11 Administration Building: 11 a.m. to 12 m.

BROWN UNIVERSITY

DIRECTORY

OF OFFICERS AND STUDENTS

1920-21

The addresses given are in Providence, unless otherwise stated. If an officer is on leave of absence for the year, his name is bracketed. The following abbreviations are used: *Fr.* = Freshman; *So.* = Sophomore; *Jr.* = Junior; *Sr.* = Senior; *Sp.* = Special Student; *Gr.* = Graduate Student; *W.* = Women's College; *J. C. B. L.* = John Carter Brown Library; *H.* = Hope College; *U.* = University Hall; *S.* = Slater Hall; *M.* = Maxcy Hall; *C.* = Caswell Hall; *B.* = Brunonia Hall; 65 College = 65 College Street, Providence, etc. Where no state is mentioned, Rhode Island is to be understood. The number *precedes* the name of a street, but *follows* the name of a building.

ABBOTT, A. L., <i>Trustee</i> 415 Pine, St. Louis, Mo.	Aldrich, C. J., <i>Fr.</i> H. 43
Abbott, D. M., <i>W. Jr.</i> 98 Comstock Ave.	Alexander, G. H., <i>Fr.</i> 122 Mineral Spring Ave., Pawt.
Abbott, I. R., <i>W. Jr.</i> 18 Halsey	Alexander, J. H., <i>Fr.</i> 270 Benefit
ABERCROMBIE, D. W., <i>Trustee</i> Worcester, Mass.	Allen, C. N., Jr., <i>Fr.</i> H. 40
Abrich, S. D., <i>W. Sr.</i> 216 Bellevue Ave.	Allen, D. E., <i>W. Jr.</i> 852 Elmwood Ave.
Adam, F. S., <i>Sr.</i> 56 Waterman	Allen, E., <i>Gr.</i> St. Louis, Mo.
Adam, J., <i>Jr.</i> M. 431	Allen, F. A. R., <i>Sr.</i> H. 46
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Adams, G. H., <i>Sr.</i> 56 Waterman	Allen, H. M., <i>W. Sp.</i> Union Village, Woonsocket
Adams, R. P., <i>So.</i> C. 31	Allen, J. C., <i>So.</i> 24 Chestnut, Pawtucket
Addoms, R. M., <i>So.</i> S. 6	Allen, R. D., <i>Gr.</i> 112 Everett Ave.
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Ahlquist, A. A., <i>Gr.</i> 64 Comstock Ave.	ALLINSON, F. G., <i>Prof.; Director of</i> <i>Museum of Fine Arts</i> 163 George
Akeley, T. B., <i>So.</i> U. 47	ALLINSON, Mrs. F. G., <i>Adv. Coun-</i> <i>cil; Acting Dean, W.</i> 163 George
Albright, J. W., <i>Sr.</i> 54 College	Allison, R. F., <i>Sr.</i> 56 Warren Ave., E. Providence
Alden, E. R., <i>So.</i> 104 Waterman	Almfeldt, J. E., <i>Sp.</i> 285 Friendship

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 Andrews, G. M., *W. So.* 98 Cushing
 Andrews, J. M., *So.* U. 44
 Anibal, W. G., *So.* U. 21
 Annan, R. H., *Fr.* 27 Larch
 Anthony, D., *W. Fr.* 17 Eighth, E. Providence
 Apollonio, E., *W. Fr.* 98 Cushing
 Appel, M. C., *W. So.* 98 Cushing
 Appel, S. B., *W. So.* 98 Cushing
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 Applegate, J. B., *So.* 80 Waterman
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 Baker, E. H., *W. Jr.* 118 Cushing
 Baker, G. L., *W. So.* 125 Governor
 Baker, R. L., Jr., *So.* 8 De Foe Pl.
 Baker, W. E., Jr. 155 Reynolds Ave.
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 Ballard, E. I., *W. Sp.* 26 Grove
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 Barrows, E. F., *So.* H. 14
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 Barry, H. S., *Fr.* H. 15
 Bartlett, D. K., Jr., *So.* C. 17
 Barton, C. S., *Fr.* 96 Bowen
 Barton, M. D., *W. So.* 98 Cushing
 Barton, N. F., *W. So.* 118 Cushing
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 BARUS, Mrs. C., *Adv. Council, W.* 181 Governor
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 Bassett, T. J., *Sp.* 11 Summer
 Batastini, A. E., *Fr.* 68 Dover
 Bateman, R., *W. So.* 118 Cushing
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 Beagan, J. E., Jr. 140 Cypress
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 Benjamin, R. F., *W. Fr.* 5 Jenckes
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 Bennett, E. J., *So.*
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 Bernard, W., *Fr.* 71 Newton, Pawt.
 Berrian, M. L., *Fr.* M. 435
 Bichwit, G., *Sr.* C. 21
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 Bien, R. P., *Fr.* 259 Benefit
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 Bigelow, G. E., *Fr.*
 Apponaug Ave., Norwood
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 Bishop, N. W., *So.*
 257 High, Pawtucket

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 Bjorklund, C. A., *Sr.* 62 College
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 Black, S. T., *Sp.* 41 George
 Blair, J. E., *Gr.* 286 Benefit
 Blake, K. P., *So.* C. 5
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 Bogman, C. B., *W. Fr.*
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 Borden, P. P., *Sr.* 36 Prospect
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 Boyd, K. V., *W. Jr.* 55 Faith
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 Boylan, I. E., *W. So.* 52 Camp
 Boylan, L. F., *Sp.* 167 Chapin Ave.
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 Brown, F. G., *Jr.* 65 Prospect
 Brown, J. G., *W. Sp.*
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 Brown, M. S., *W. So.* 98 Cushing
 Brown, P. C., *So.* 104 Waterman
 Brown, P. M., *Jr.* 93 Wood
 Brown, R. D., *Jr.* 34 Benefit
 Brown, R. M., *W. Fr.* Harmony
 BROWN, R. P., *Trustee*
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 Bryden, J., Jr., *So.* U. 48
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 Bugbee, R. M., *W. So.*
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 Burdick, S. A., *Sr.* 104 Waterman
 Burdon, K. L., *Gr.* 102 Mitchell
 Burgess, C. G., *Fr.* 12 Grove
 Burgess, H. E., *W. Jr.* 118 Cushing
 BURGESS, R. W., *Asst. Prof.*
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 Burgh, R. J., *Jr.* H. 31
 Burke, T. F., *Sr.* 16 Berndt, Pawt.
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Burt, R. U., *W. So.* 53 Grace, Auburn

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Burt, M. E., *Fr.* U. 54

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Campbell, F. I., *W. Sr.* 118 Cushing

Campbell, J. W., *So.* H. 8

Campbell, L., *W. Fr.* 37 Methvl

Campbell, M., *Jr.* 65 Prospect

Campbell, W. R., *Sr.* 62 College

Candee, M. D., *W. Fr.* 98 Cushing

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Cantor, M., *Sr.* C. 2

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Carlen, L. H. N., *W. Sr.*

75 Raymond

Carlen, M. E., *W. Sp.* 14 Mansfield

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Carlsson, G., *Sp.* 189 Williams

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Carr, H. S., *Fr.* 175 Thayer

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Carrigan, R. E., *So.* U. 46

Carter, J. F. S., *So.* H. 37

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CHAFEE, Z., *Trustee* 5 Cooke

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Chaffee, H. A., *Jr.* H. 29

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Chaloux, E. J., *So.* 108 Waterman

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Chapman, J. W., *Sr.* 104 Waterman

Chase, N. B., *Sp.* 56 Waterman

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Clair, W., *Fr.* U. 55

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 Coe, S. R., *So.* U. 51
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 Conant, R. C., *Fr.* U. 19
 Connelly, H. J., *Sr.* 115 Waterman
 Connelly, J. F., *So.* U. 30
 Connett, E. F., *Jr.* 103 Williams
 Connett, H. S., *So.* 104 Waterman
 Cook, R. E., *Gr., Asst.* 119 Waterman
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 Cooke, S. P. W., *So.* 405 Angell
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 Cox, P. H., *So.* S. 4
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 Csepely, J. A., *Sr.* 388 Valley
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 Cullerton, O. F., *Fr.* 41 Angell
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Curry, G. T., *Sr.* 250 Cypress

Curry, P. M., *Gr.* Anthony

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Cushman, W. M., *So.* 4 Manning

Cutler, J. J., *So.* 108 Waterman

Cutler, M. A., *W. Fr.* 30 Forest

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Dalton, J. M., *Sp.* U. 10

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Day, C. R., *So.* H. 3

Day, E. W., *Jr.* 26 Brooks, Cranston

Day, G. W., *W. Fr.* 118 Cushing

Day, L. S., *Jr.* H. 41

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Decker, E. J., *So.* 175 Thayer

Decker, G. R., *So.* 175 Thayer

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de Goey, C. R., *Jr.* 65 Prospect

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Delaney, Miss E. J., *Gr.*

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De Milia, A. F., *Fr.* M. 323

Dempsey, C. T., *So.* H. 25

Denman, J. R., *Sp.* S. 6

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Desmond, A. E., *W. So.*

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Dewey, R. K., *Sr.* 56 Waterman

Dewing, A. F., *Fr.* 203 Camp

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Dick, M. S., *W. So.* 118 Cushing

Dickinson, M. G., *W. Jr.*

118 Cushing

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Dimitroff, V. T., *Gr.* 58 Cranston

Dine, N., *So.* C. 24

Di Napoli, A. M., *W. Sp.*

125 Governor

DODGE, C. W., *Asst. Prof.* 238 Gano

Dodge, H. A., *Sr.* 108 Waterman

Dolbeare, W. I., *So.* 57 Waterman

Donnelly, E. L., *Fr.* 9 Charles Field

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Tuckerman, Arctic

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DOYLE, Miss S. E., *Adv. Council, W.*

119 Prospect

Doyle, T. W., *Jr.* 129 Rochambeau

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 Eddy, C. M., *Jr.* 119 Waterman
 Eddy, F. G., *W. Sr.* 25 Payton
 Eddy, W. H., *Gr.* 666 Angell
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 Eisenberg, J. S., *So.*
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 Engalitcheff, V. N., *So.* C. 1
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- Ericson, E. G., *Fr.* 101 Williams
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 Eteson, F. C., *Jr.* 48 College
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- Fahlquist, F. E., *So.*
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 Fairweather, M. L., *W. So.*
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 Fales, H. L., *So.* 2 Prospect
 Familton, H. S., *So.* C. 23
 Fancher, F. S., *W. Sp.* 351 Pine
 Fanning, C. T., *W. So.* 22 Hart
 Farley, W. R., *Fr.* 2 Brenton Ave.
 Farrell, A. A., *Sp.* S. 14
 Farrell, G. P., *Sr.* 193 Summit, Pawt.
 Farrell, R. J., *Jr.*
 180 Hedley Ave., Central Falls
 Faucher, I. E., *Gr.*
 Hope St. High School
 Faulkner, H. A., *Sr.* H. 24
 Faulkner, H. R., *So.* 54 College
 FAUNCE, W. H. P., *President*
 180 Hope
 Faunce, W. M., *Sr.* 56 Waterman
 Fawcett, J. E., *Jr.* 4 Manning
 Feely, P., *So.* C. 27
 Feiner, A. H., *Jr.* 14 Star
 Fellowes, F. G., *Fr.* 60 Charles Field
 Fellowes, R., *Fr.* 60 Charles Field
 Fenner, H. W., *W. Fr.*
 147 Woodbine, Auburn
 Fenner, W., *Jr., So.* 104 Waterman
 Ferguson, C., *W. Fr.* 98 Cushing
 FERGUSON, J. B., *Demonstrator*
 369 Broad
 Ferguson, L. H., *W. Sr.* 60 Belair Ave.
 FERRY, Mrs. K. P., *Resident Nurse, W.*
 98 Cushing
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 Finegold, P., *So.* 53 Douglas Ave.
 Finkelstein, R. M., *W. Jr.*

125 Governor

Fiore, O. C., *W. Jr.* 98 Cushing

Fish, C. J., *Sr.* 36 Prospect

Fish, F. C., *Sp.* 22 Atlantic Ave.

Fisher, J. L., *So.* 130 Mitchell

Fitzgerald, A. L., *So.* H. 35

FitzGibbon, W. J., *Jr.* 65 College

Flather, M. R., *Fr.* H. 47

Fletcher, E. A., *W. Jr.* 98 Cushing

Fletcher, S. V., *Sp.* 35 Halsey

Fletcher, W., Jr., *Fr.* U 34

Flumere, J. M., *W. So.* 118 Cushing

Fogg, C. M., *Fr.* S. 10

Foley, G. F., *Fr.*

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Forstall, W. C., *Jr.* 4 Manning

Forsyth, H. E., *Fr.* H. 16

FOSTER, Miss M. M., *Audit Clerk*

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FOWLER, H. T., *Prof.* 127 Lloyd Ave.

Fowler, H. N., *Fr.*

5 Fowler, Mansfield, Mass.

Fox, A. S., *So.* 65 College

Frant, I., *W. Sr.* 98 Cushing

Freed, A., *Sr.* 281 Public

Freedman, J., *Fr.* U. 10

Freeman, C. L., *So.* 31 Hawthorne

Freeman, R. B., *Fr.* 31 Hawthorne

French, H. S., *W. Fr.* 98 Cushing

Frey, A. J., *Jr.* 41 George

Friedman, J., *Fr.* 4 Quince

Fritz, E. L., *W. Fr.* 193 Althea

Frohock, W. T., *So.*

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Fuller, R. C., *Sr.* 80 Waterman

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Gale, E., *Jr.* C. 30

Gallivan, Miss E. C., *Gr.* 83 Sorrento

Gallivan, H. F., *W. Jr.* 83 Sorrento

Gallup, H. E., *Sr.* 104 Waterman

Gallup, L. E., *Sp.* 56 Waterman

GAMMELL, W., *Trustee* 170 Hope

Gardner, C. F., *Fr.* 44 Orchard Ave.

GARDNER, H. B., *Prof.*

54 Stimson Ave.

Gardner, R. L., *Sp.* 65 Prospect

Garland, C. G., *So.* H. 18

Garland, T. A., *W. Fr.* 96 So. Angell

Gaskill, M. T., *So.* 8 De Foe Pl.

Gates, G. H., *So.* U. 47

Gates, L. O., *Sr.* 41 Angell

Gavitt, L. E., *Sp.* 2 Prospect

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Gilchrist, B. S., *Jr.* 108 Waterman

Gilchrist, D. D., Jr., *Sr.* 37 Hart

GILMAN, R. E., *Asst. Prof.* 654 Hope

Gipfel, P. A., *Sr.* U. 52

Girvin, R. H., Jr., *So.* 96 Waterman

Giura, A., *Sr., Gr.* S. 7

Glaubman, M., *Sr.* 5 Jenckes

Gleason, A. C., *W. Sp.* 66 Pitman

Gleason, K. P., *So.* 65 Prospect

Gleazer, E. J., *Sp.* 159 Hanover

Glover, M. H., *Jr.* 36 Prospect

Goddard, A. L., *So.* C. 7

GODDING, Mrs. C. S., *Head of Miller*

Hall, W. 118 Cushing

Goff, A. F., *Fr.* 26 Western

Goff, C., *Fr.* U. 34

- Goff, L. B., *So.* 286 Benefit
 Goff, R. H., *Fr.* 286 Benefit
 Gogreve, A., *Sp.* 65 College
 Goldberg, L., *Sr.* 13 Kirk
 Goldberger, M., *Fr.* 11 John
 Goldstein, E., *So.* 168 Prospect
 Gonzalez, G. E., *So.* 2 Prospect
 Goodall, A. R., *Sp.* C. 30
 Goodell, R. A., *Fr.* 150 Smith
 Goodman, J., *Fr.* 10 George, Pawt.
 Goodman, R. F., *Jr.* H. 24
 GORHAM, F. P., *Prof.* 151 Meeting
 Gorham, S., *Sp.* 151 Meeting
 Gorman, E. J., Jr., *So.* 41 George
 Gottlieb, H. J., *Fr.* M. 433
 Goulding, S. D., *Fr.*
 58 Mary Ave., E. Providence
 Gourse, S. N., *Fr.* M. 322
 Granniss, E. R., *Sp.* 175 Thayer
 Grant, D. L., *Fr.* 119 Waterman
 Gray, D. H., *W. Fr.* 134 Pleasant
 Green, A. D., *Jr.* 108 Waterman
 Green, C. A., *Sp.* 159 Brook
 Green, F. O., *Sr.* 41 George
 GREEN, T. F., *Trustee*
 Turks Head Bldg.
 Greene, D. W., *Fr.* C. 28
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 43 Irving Ave.
 Greene, R. D., *Jr.* 332 Olney
 Greene, R. D., *So.* C. 27
 Greene, R. H., *Jr.* 36 Prospect
 Greene, W. C., Jr., *Jr.* 54 College
 Greenstein, J., *So.* 177 Dudley
 Gregory, K. K., *So.* 167 Angell
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 Gross, F. L., *So.* C. 32
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 Guillemette, D. V., *Jr.*
 70 Magill, Pawt.
 Gulian, M., *So.* 65 College
 Gup, R. S., *W. So.* 150 Gallatin
 Gup, S. M., *Gr.* 150 Gallatin
 Guthrie, G. D., *Fr.* H. 9
 Gwynne, A. E., *Sr.* 54 College
- Hackett, J. T., *Jr.* 41 Angell
 Hadfield, T. R., *So.* 119 Waterman
 Hagan, J. H., Jr., *So.* 40 Carlisle
 Hagstrom, E. L., *W. So.*
 11 Manning, Pawt.
 Haley, C. W., *W. Sr.* 457 Friendship
 Half, I., *Fr.* H. 20
 HALL, J. A., *Assoc. Prof.* 91 Governor
 Hall, P. G., *W. Jr.* 98 Cushing
 Hall, W. W., *Sr., Gr.* 80 Waterman
 Halloran, M. I., *W. Sr.* Berkeley
 Hambleton, H. L., *Sr.* 96 Waterman
 Hammond, E. H., Jr., *So.*
 4 Manning
 Hanchett, R., *W. So.* 19 Barnes
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 Harlow, E. W., *Fr.* S. 3
 HARKNESS, A. G., *Prof.* 7 Cooke
 Harper, H. C., *W. Jr.* 98 Cushing

- Harper, W. J., *Sp.* River Point
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HARRIS, R. G., *Gr., Instr.* C. 11
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Harvie, J. B., *Jr.* 36 Prospect
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Hassinger, M. G., *W. So.* 98 Cushing
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Hatch, W. P., *So.* 208 Smith, Edgewood
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Hayden, T. J., *Jr., Fr.* 446 Woodward Rd., No. Providence
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Hayward, W. B., *Fr.* 101 Medway
Hayward, W., *Fr.* Wickford
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Heddy, G. E., *Fr.* 78 Broadway
Heeks, W. G., *So.* 57 Waterman
Heinrich, H. W., *Sp.* U. 18
Heller, J., *W. So.* 98 Cushing
Henry, C. L., *Fr.* H. 2
Henshaw, W. H., *So.* C. 8
Hering, E. R., *Sr.* 80 Waterman
Herridge, W. A., *Fr.* M. 428
Hewitson, E. H., *So.* 119 Waterman
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Hobart, E. W., *Fr.* 96 Waterman
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Holland, M. S., *W. Fr.* 235 Meeting
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Holt, W. S., *Jr.* 54 College
Honan, F. J., *Sr.* 242 Ives
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Hopkins, C. E., *Fr.* 5 Wesleyan Ave.
Hopkins, G. A., *W. Fr.* 98 Cushing
Hopwood, P., *So.* 65 College
Horne, C. E., *Jr., So.* U. 25
Horr, G. E., *Fellow* Newton Centre, Mass.
Horsefield, R. W., *Fr.* C. 26
Horton, R. F., *So.* 2 Prospect
Hosmer, D. E., *Gr.* 13 Kossuth, Pawt.
Hosp, E. A., *Fr.* H. 15
Hotchkiss, D. B., *W. So.* 130 Mineral Spring Ave., Pawt.

- Hough, F. O., *Fr.* C. 12
 Houtman, G. D., *Sp.* 57 Waterman
 Hoving, W., *Sr.* 65 College
 Howard, C. B., *Jr.* S. 12
 Howard, H., 2d., *Fr.* 434 Brook
 Howard, N. O., *Gr.* 108 Gallatin
 Howard, W. M., *Jr.* 65 College
 Howarth, A., *W. Fr.*
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 Hoxsie, N. C., Jr., *So.* H. 1
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 Hoyt, C., *Trustee*
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 Hratchia, H., *Sp.* 348 Lockwood
 Hudson, A. O., *Fr.* 4 Manning
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 Hughes, R. W., *So.* 108 Waterman
 Humes, Miss H. L., *Gr.*
 174 First, E. Providence
 Hummel, E. A., *So.* U. 58
 HUNKINS, C. H., *Assoc. Prof.*
 120 Waterman
 Hunt, G. H., *Fr.* M. 433
 HUNTINGTON, H. B., *Assoc. Prof.*
 23 John
 Huntley, H. G., *Fr.* C. 20
 Hurd, D. W., *Sr.* 261 Thayer
 Hutchinson, R., *W. Fr.* 98 Cushing
 Hylan, D. R., *Gr.* 279 George

 Iannaccio, A. M., *W. Fr.*
 125 Governor
 Icaza, E., *Jr.* U. 27
 Inman, R. G., *Fr.* H. 17
 Intlehouse, E. E., *Fr.* 45 Detroit Ave.
 Isé, H., *Jr.* 88 Vernon
 Itschner, F. L., *Sr.* H. 21

 Jackson, E. P., *Sr.* 2 Prospect
 JACOBS, W. B., *Prof.* 310 Olney
 Jacobson, S., *W. So.* 118 Cushing

 Jainsen, W. C., *Jr.* 65 College
 Jeffers, A. B., *Sp.* H. 26
 Jeffers, T. R., *So.* 48 College
 Jeffery, W. H., *Gr.* 85 Potter Ave.
 Jellison, J. R., *Fr.* 9 Charles Field
 Jenckes, M. A., *Fr.* H. 13
 Jenkins, E. D., *Fr.* M. 428
 Jenks, R. P., *Sr.* 48 College
 JENNINGS, A. J., *Trustee*
 Granite Block, Fall River, Mass.
 Jewell, W. B., *So.* 19 George
 Jillson, H., *W. Fr.* 137 Camp
 Jillson, W. H., *Jr.* 108 Waterman
 JOHNSON, A. B., *Assoc. Prof.*
 Rehoboth, Mass.
 Johnson, C. R., *So.* 36 Prospect
 Johnson, E. V., *Fr.* U. 28
 Johnson, G. C., *Fr.* 175 Thayer
 Johnson, H. F., *Jr.* 573 Public
 Johnson, K. D., *Sr.* 48 College
 Johnson, M., *Sp.* U. 31
 Johnson, R. D., *W. Fr.*
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 Johnston, J. C., *Sr.* C. 25
 Johnstone, G. C., *Jr.* 65 College
 JONES, A. H., *Assoc. Prof.*
 144 Congdon
 Jones, D. L., *Fr.* H. 17
 Jones, F. L., *So.* C. 16
 Jones, H. W., *Sp.* 65 College
 Jones, J. D. E., Jr., *So.* 4 Manning
 Jones, M. E., *W. Fr.* 118 Cushing
 Jones, R. P., *Sr.* 80 Waterman
 Jones, R. V., *Jr.* 65 Prospect
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Kidd, O. W., *W. Fr.* 98 Cushing

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Kimball, R. S., *Sr.* 41 George

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123 Waterman

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Kingsley, N. G., *Gr.* 605 Hope

Klingon, M. J., *So.* M. 320

Klivansky, S. M., *So.* C. 24

Kneeland, W. E., *So.* 119 Waterman

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Kuhn, C. S., *Fr.* 286 Broad

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La Fond, A. B., *W. Sr.*
125 Governor

Lalumia, C. J., *Fr.* M. 324

Lamb, M. U., *So.* U. 44

Lamson, H. D., *Fr.* H. 40

Landon, M., *W. Fr.* 98 Cushing

Lane, E. H., *W. Fr.* 98 Cushing

Lane, R. A., *Sr.* U. 57

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Lanpher, L., *So.* C. 32

Lapchianjian, G., *Jr.* 82 East, Pawt.

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Larrabee, A. S., *So.* S. 14

Larrabee, E. N., *So.* H. 5

Larry, L. S., *Jr.* H. 34

Larson, A. N., *So.*
219 Pontiac Ave., Auburn

Larson, H. K., *So.* 56 Waterman

Laudati, A. L., *Fr.* C. 9

Laurans, W., *Fr.* M. 322

Lawrence, N. L., *So.* 57 Waterman

Lawson, R. C., *So.* 104 Waterman

Lazure, C. T., *Jr.* 41 George

Leach, E. F., *Fr.* 86 Wendell

Learned, A. A., *Sp.* 76 Camp

Leavens, D., *W. Jr.* 118 Cushing

Leddy, G. V., *So.* 41 George

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Lester, W. A., *Jr., Sp.* 2 Prospect

Levin, M., *Fr.* 28 Bernon

Lewis, B. M., *Jr.* 56 Waterman

Libby, F. W., *Jr.* M. 430

Libby, S. D., *Jr.* H. 39

Libby, V. A., *So.* 104 Waterman

Lincoln, E. W., *So.* 56 Waterman

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- Lisbon, W., *So.* 26 Putnam
- Litchfield, A. K., *Sp.* 119 Waterman
- LITCHFIELD, Miss H. P., *Order Clerk*
30 Beckwith, Auburn
- Litchfield, R. C., *So.* 119 Waterman
- Little, L. K., *Gr.* 28 Spring, Pawt.
- Littlefield, F. B., *Jr.* 104 Waterman
- Loacker, W. J., *Fr.* M. 426
- Lochman, E., *W. So.* 98 Cushing
- Locke, R. C., *Fr.* H. 11
- Lohnas, J. W., *So.* 2 Prospect
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- Love, E. A., *Gr.* 9 John
- Lovell, M. B., *W. Sr.* 88 Hudson
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- Lubin, J., *So.* H. 20
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- Lyman, R. E., *Jr.* 36 Prospect
- Lynch, A. K., *W. So.* 125 Governor
- Lynch, F. C., *Sr.* C. 14
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- Lyon, L. N., *W. Jr.* 118 Cushing
- Lyons, J. F., *So.* 167 Woodward Rd.
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- McAllister, L. P., *Jr.* H. 27
- McAuslan, B., *Jr.* 2 Prospect
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- MacCausland, C. A., *Fr.* U. 60
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- McCormick, M. L., *W. So.* 98 Cushing
- McCormick, W. B., *So.* 65 College
- McCraw, J. H., *Jr.* 36 Prospect
- McCreight, C. C., *Fr.* 96 Waterman
- McCumber, B. R., *So.* 41 George
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- McElroy, V. R., *W. Fr.* 98 Cushing
- McEwen, E. L., *W. Jr.* 24 Warren
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McKendall, B. W., *Sr.*

104 Waterman

McKenny, R. C., *Sr.* 104 Waterman

MacKenzie, H. L., *Jr.* M. 429

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McMichael, M. O., *W. Sp.*

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Mackintosh, B., *Sr.* 56 Waterman

Macmillan, E. S., *Sr.* 56 Waterman

Macready, G. P., *Jr., Sr.* 64 Larch

Madowsky, H., *Jr.* H. 38

Maginnity, E. D., *W. Fr.* 79 Dana

Magnuson, H. E., *Sr.* 104 Waterman

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Manser, S. T., *So.* 41 George

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Marks, R., *W. Fr.*

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Marley, A. E., *Fr.* 159 Elm

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Mathus, H. M., *W. Fr.*

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39 Henry, Edgewood

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Matteson, S. A., *W. Sp.*

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	210 Waterman	Wood, E., <i>Trustee</i>	
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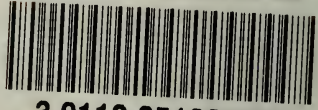
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